

JULY '59

MODERN TEXTILES

MAGAZINE

Specializing in Man-Made Fibers and Blends since 1925

FIBERS

FABRICS

FINISHES



Allied
Chemical's
GLENN NESTY-
what next
after nylon?
Story page 21

THIS MONTH'S SPECIAL FEATURES:

FTC issues labeling rules

How to dye Zefran wool blends

Fiber translation in blends

AND 12 MORE USEFUL ARTICLES AND TIMELY REPORTS



Wider use of Scissors-Type Thread Cutting Temples on Draper Looms. Enthusiastic mill interest has prompted the design and adaptation of temples featuring the scissors-type thread cutter to most loom conditions. These new temples can now be applied to virtually all X, X-2, XD, XP, XP Special, XP-2, XL, XK, E, L and O model looms. Fewer parts cut maintenance costs and elimination of thread cutter lubrication reduces the danger of staining the cloth. For complete information contact your Draper sales representative.



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MODERN TEXTILES

July, 1959 Vol. 40, No. 7

MAGAZINE

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Established 1925

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WM-2

SANFORD, NORTH CAROLINA, U. S. A.

1959

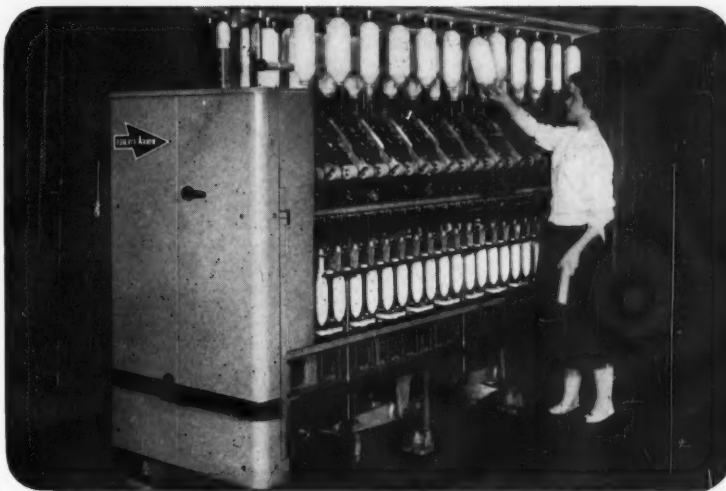
ARROW WM-2 LONG FIBER SPINNING FRAMES OFFER WIDEST YARN MAKING VERSATILITY

A dynamic program of new product design, advanced styling and aggressive merchandising is underway by all segments of the Textile Industry.

Knitting yarns of higher quality and greater interest are being called for in worsted, synthetics and blends. Finer weaving yarns up to 2 ply 80's are being called for and a great many blends are currently being explored. The longer fibers are in wide demand and the next few years should see a substantial boom in this field.

The demand for high bulk knitting yarns and the finer weaving yarns plus all of the newer fabric effects being created require fiber lengths from 3 to 8 inches long.

ARROW WM-2 frames are suitable for making yarns in any fiber length from 1½ to 8 inches. They provide great versatility in handling 100% synthetics, blends of synthetics, 100% worsteds and blends of worsted with synthetics in this range. Better quality yarns with greater evenness, bigger package sizes and higher production speeds are produced on ARROW frames.



- Spins yarn from any natural or synthetic fiber or any blend.
- PermaSet Drafting handles any fiber length from 1½ to 8 inches
- No roll setting changes needed at any time
- Great versatility for changing yarn numbers, twist, draft, ring size, and spindle speed
- Drafts as high as 24 on worsted, 60 on synthetic
- Produces yarn with better evenness and greater breaking strength
- Ball bearing top and bottom rolls eliminate all lubrication in drafting zone
- Almost ideal spinning conditions from delivery roll to spindle
- Runs at higher front roll, traveler and spindle speeds
- Reduces ends down by more than 50%
- Puts twice as much yarn on the bobbin as older frames
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- Frame is built in the wide-stance 36-inch width
- Uses ball bearings at every moving, turning or oscillating motion
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- Frame arranged for practical application of overhead cleaning and vacuum floor sweeping

Roberts ShortFlo System for Making Long Fiber Yarns

Roberts Company offers complete technical service in adapting its ShortFlo System for the production of long fiber yarns. This includes the complete yarn manufacturing process starting with tow converters, blending machines, pin drafting, roving frames, spinning frames, winders and twisters.

Where mills have existing equipment, full consideration is given to

utilizing it whenever possible. Or, if a new long-fiber program is planned, all machinery can be specified, and the complete yarn organization set up.

The ShortFlo System for making long fiber yarns requires a minimum number of processes. Many doublings are provided to insure exceptionally good blending of fibers, improved evenness and better strength.

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New Polyester Fiber Offered

A new polyester fiber has appeared on the textile scene. It is "Vycron", a polyester in both staple fiber and continuous filament form manufactured by North American Rayon Corp., a division of Beaunit Mills, Inc. Last month North American began a program of advertising and merchandising for Vycron. The fiber is also available as tow for use in making direct spun yarns. Wide use of such yarns is foreseen by North American for raincoatings and industrial fabrics.

Charles P. Bertland, vice president in charge of marketing for Beaunit's fibers division said that several mills are already weaving fabrics using blends of Vycron with cotton, wool and other manmade fibers. Vycron staple is priced at \$1.36 a pound. Details of other prices will be found in the price tables in the back pages of this issue. *Data sheets giving details of the properties of Vycron may be had free by writing the editors.*

Wilkinson Heads Wool Group

Improved business conditions in the wool textile industry increase the need for strong, unified group action, William I. Kent, head of Kent Mfg. Co. and retiring president of the National Association of Wool Manufacturers, told the recent 94th annual meeting of the association in New York. He stressed that "we must strive to protect our improved position from threats such as are inherent in forthcoming international tariff-cutting negotiations."

Edwin Wilkinson, with the association since 1933, and executive vice president since 1952, was elected to succeed Kent. Wilkinson, as president, continues as the chief paid NAWM executive officer.

Abney to Make Maxbo Looms

An agreement was signed in June under which Abney Mills, Greenwood, S. C., was licensed to manufacture and sell the Maxbo shuttleless loom in the United States. The looms will be manufactured in the shops of Southeastern Loom & Machine Works in Greenville, S. C., owned by Abney. Sale of the looms in the U.S. will be handled by Edda International Corp., a company with offices in Greenville and New York which hitherto has specialized in importing European textile machinery.

Nopco Acquires Wolf

Nopco Chemical Co. has acquired all the capital stock of Jacques Wolf & Co., Clifton, N. J., in a cash transaction, according to Ralph Wechsler. Nopco will operate the Wolf company as a wholly-owned subsidiary. Wolf's annual volume of sales has been between \$5,000,000 and \$6,000,000 for the past five years. The Nopco and the Wolf firms each are over 50 years old.

EDITOR'S NOTE: On June 3, the Federal Trade Commission published its definitions of generic names of manmade fibers and yarns as part of its rules for enforcement of the Textile Fiber Products Identification Act which will become effective in March, 1960. Beginning with this issue, our Yarn Prices, starting on Page 47, have been regrouped to conform with the FTC's definitions.

Along with these changes the price tables have been broadened to include prices of Vycron, the new polyester fiber of North American Rayon Corp., and Creslan, American Cyanamid's new acrylic fiber.

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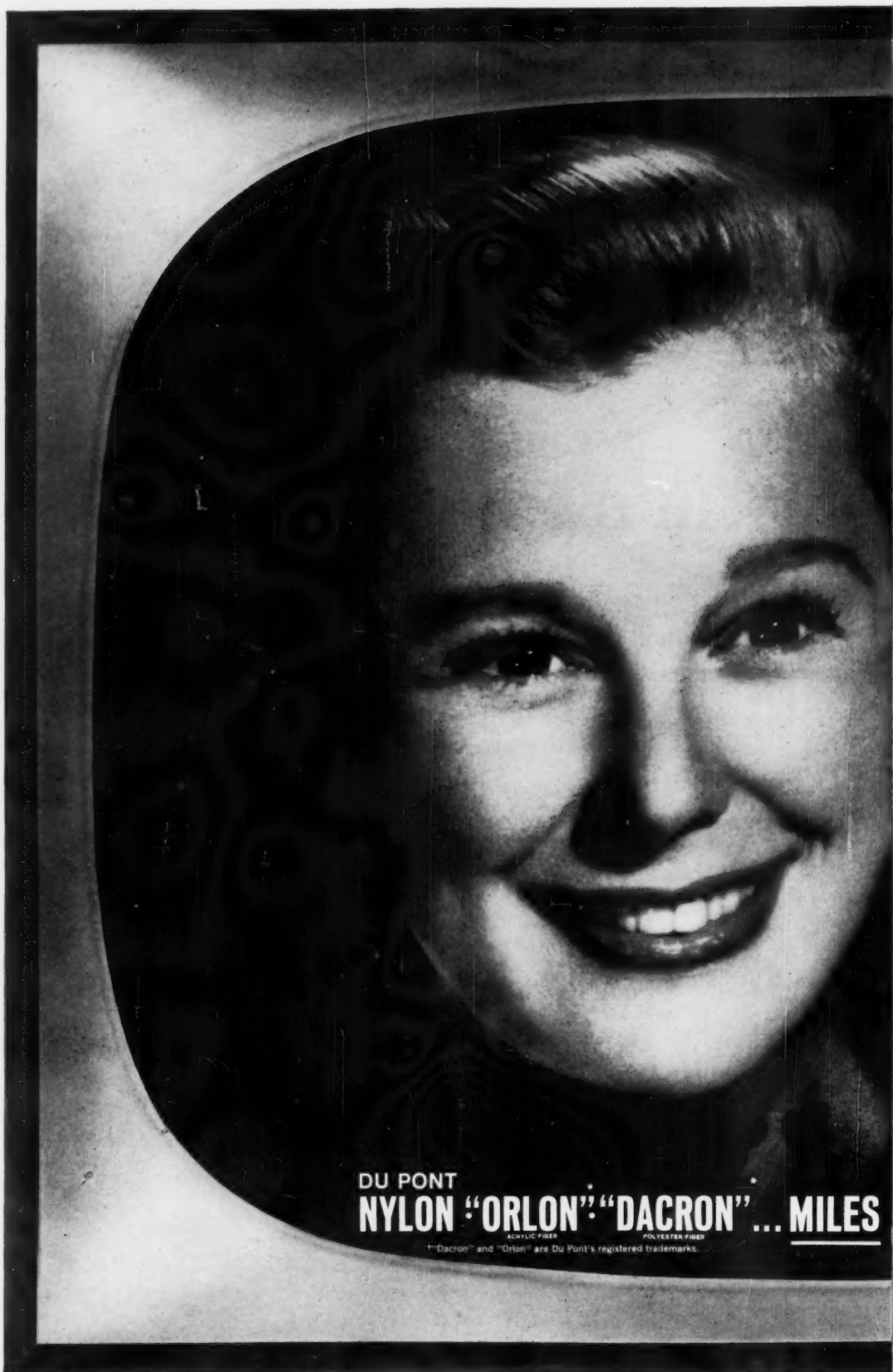
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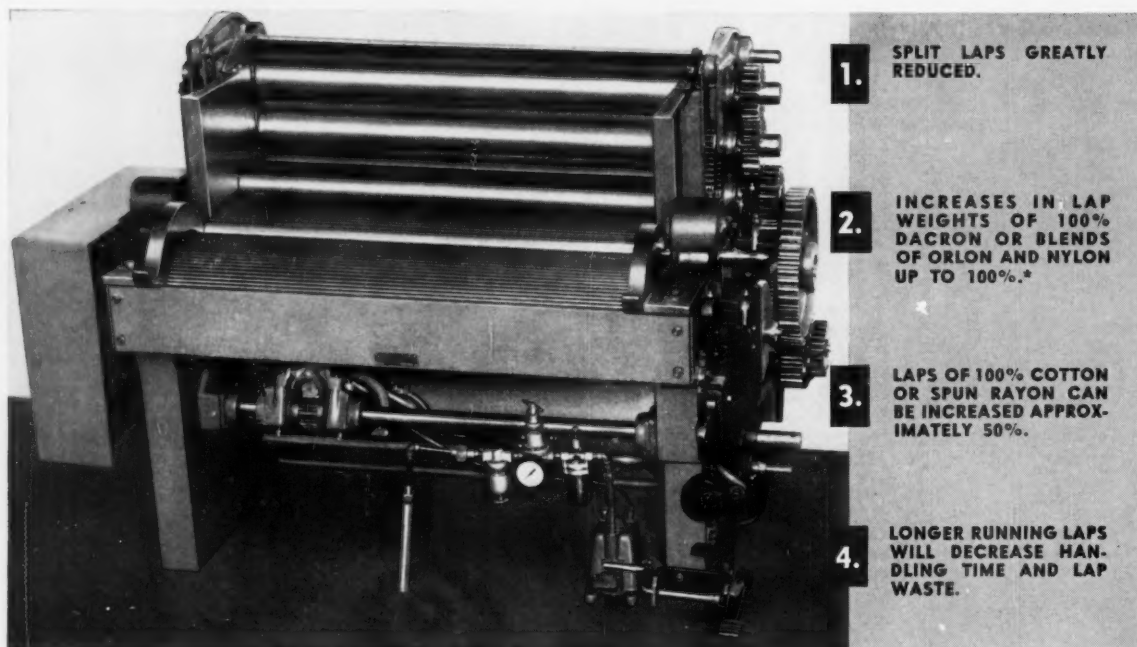
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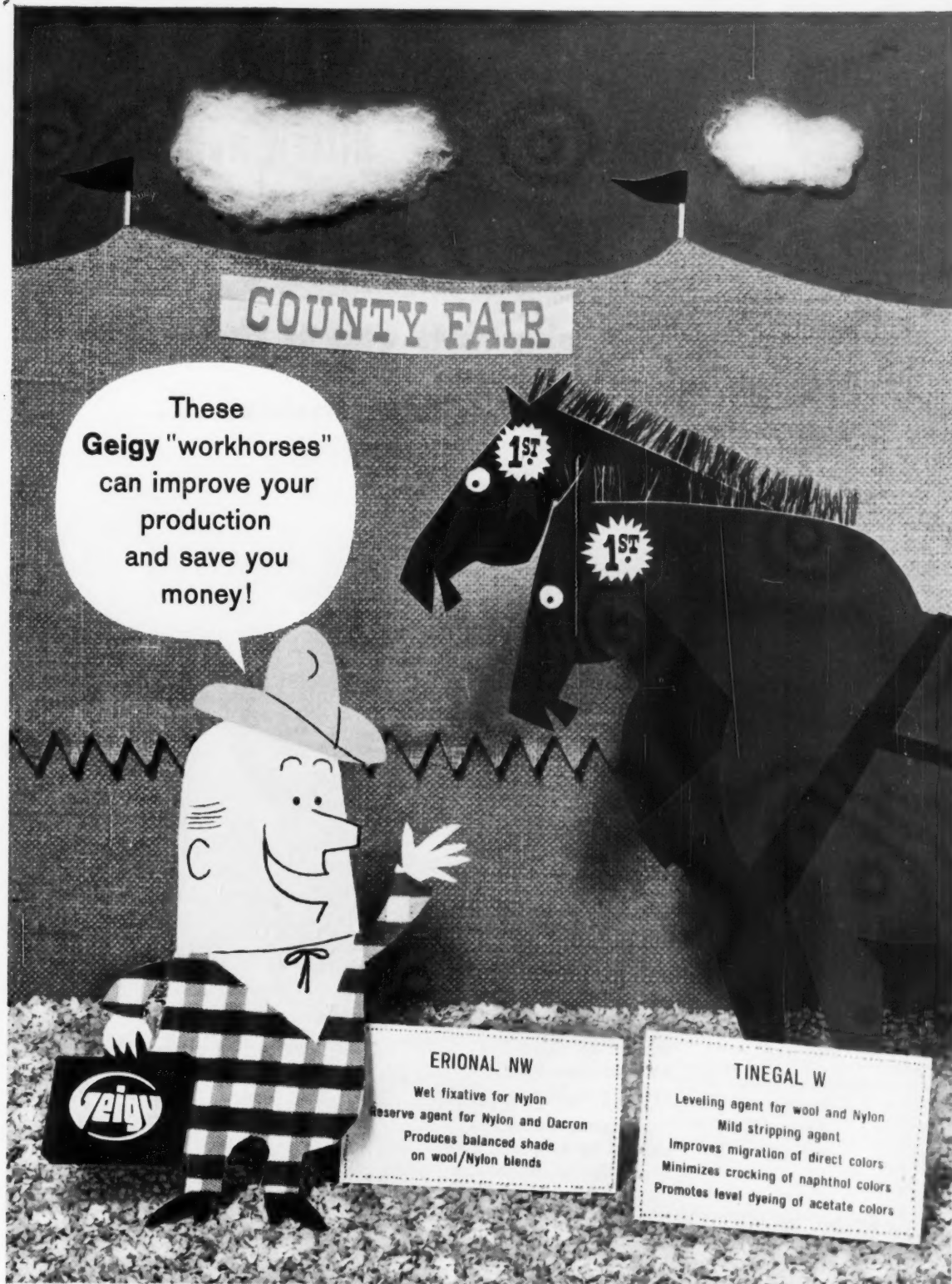
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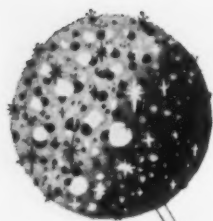
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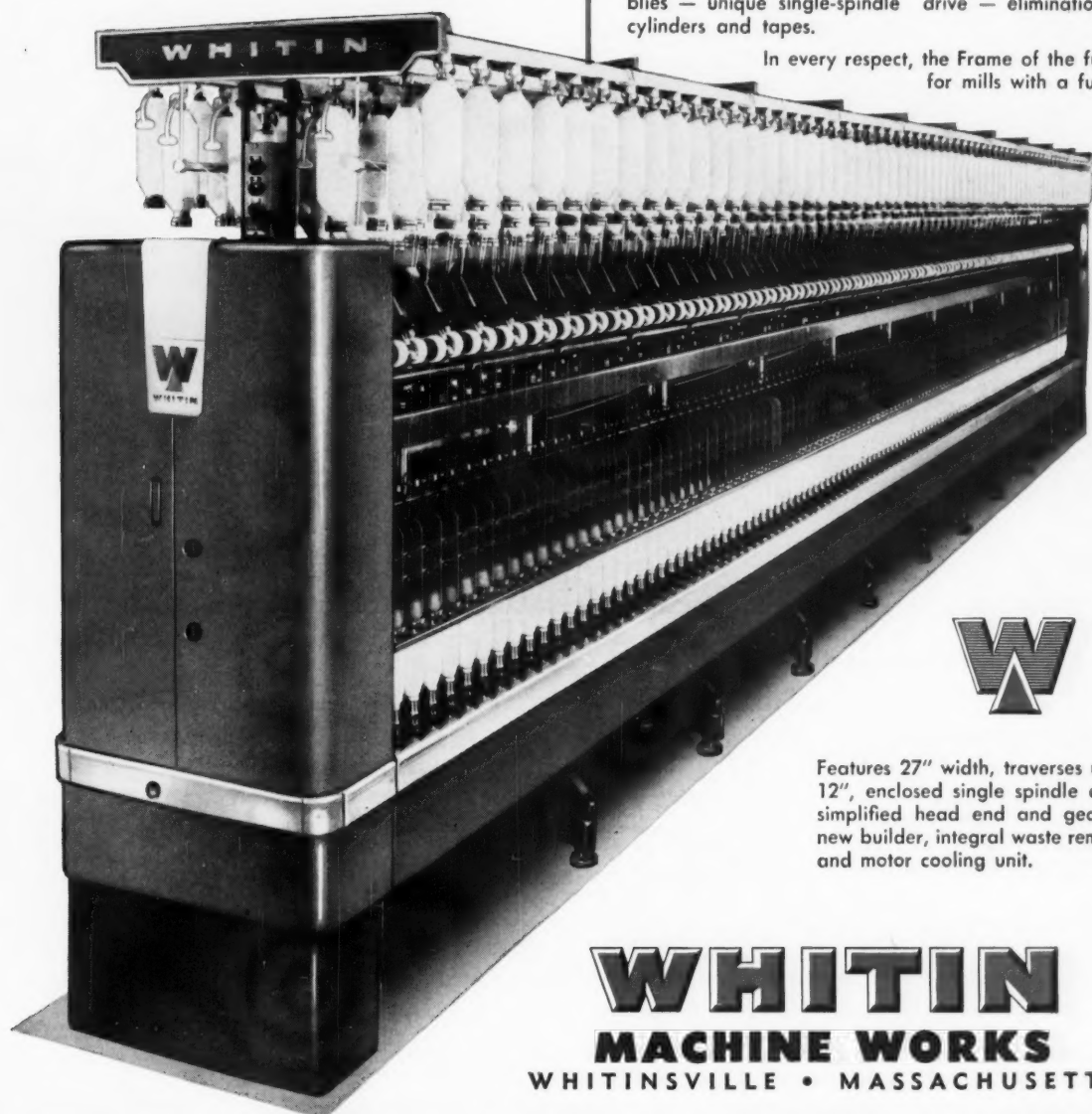
IN the new **PIEDMONT**, Whitin offers you a Spinning Frame which is not only smart in appearance, not only advanced in design — but which is also foremost in economy of operation. There are **PIEDMONT** benefits in every phase of your spinning operation.

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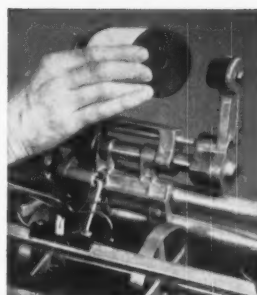
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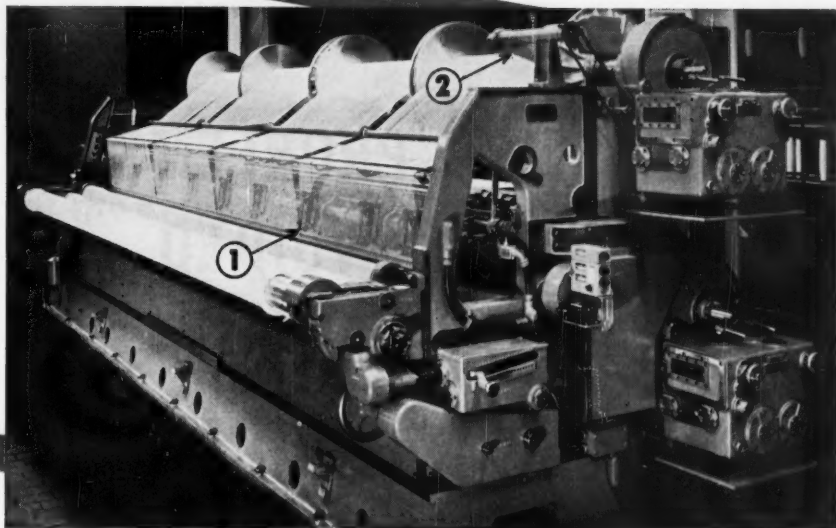
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Because the fiber ends are essentially smooth, they will slide down the body of the package when the yarn is relaxed. As the machine starts up again and the slack is eliminated, the cone may be lifted off the arbor. Here are two easy ways to avoid this problem:

- Place a piece of carpet under the yarn package with the bottom of the cone passing through the carpet and the coned yarn resting on the pile of the carpet. Thus, the relaxed yarn will rest on the carpet and will not unseat the cone.

OR

- Re-install the arbors so that the cones will be horizontal rather than vertical. The relaxed yarn will then run freely from the package without sloughing. Post-tensioning devices will help control uniform yarn delivery

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National Aniline Division

MODERN TEXTILES

Magazine

Publisher's Viewpoint

Help in the Fight against Low-Wage Imports

The American Tariff League has voted to reshape its policies, activities and administration and to adopt a new name, "Trade Relations Council of the United States." This news, coming at a time when the question of protection from textile products imported from low-wage foreign countries is growing more urgent, is indeed heartening.

In explaining the change, Ralph A. Butland, president of the old League and new Trade Relations Council, points out that patterns of international trade have changed drastically in recent years. Members of the League, including several hundred industrial companies, farm organizations and trade associations, decided that a new organization, with a broader program "would better serve the interests of health, mutually satisfying foreign commerce."

Butland said further that the Trade Relations Council "will seek to encourage an international atmosphere emphasizing freedom to trade, rather than free trade. No country has ever been able to sustain free trade for long. The realistic goal for all trading nations is fair and orderly competition in world markets."

As part of its expanded activities, the Trade Relations Council plans to undertake a series of special fact-finding projects, covering such key issues as foreign and domestic wage differentials; the Communist economic offensive; the rise of regional trading systems; disruptive trade practices here and abroad; cartels and dumping; the General Agreement on Tariffs and Trade; U.S. foreign investment policy; and U.S. government purchasing. From these studies will emerge the materials for the Trade Relations Council's major mission, "a broad-based program of public information to alert Americans to the facts about world trade and to the principles governing trade economics."

Record Is Distinguished

In further explaining the aims of the new form of the Tariff League, Butland pointed out that since its founding 74 years ago, the League has been a vigorous proponent of Federal legislation to curb unfair foreign trade practices and to safeguard American industry,

labor and agriculture from injury due to unreasonable import competition. The League has been sharply critical of U.S. participation in the General Agreement on Tariffs and Trade, viewing it as a supra-national body that could thwart U.S. economic objectives. The League has urged a complete revision of what it has called our "chaotic tariff structure."

In the future, the Trade Relations Council, Butland said, will "actively support sound policies aimed at developing the economic vigor of all free nations. Moreover, we are convinced that such policies, if carefully and selectively carried out, need not sacrifice investments, jobs, and other economic opportunities in our country or any other."

We Are Not Alone

Functioning as it will within the broad framework of these realistic policies, the new Trade Relations Council should prove a valuable ally in the textile industry's struggle to obtain effective protection against low-priced imported textile products. The Trade Relations Council will bring to our industry the help of many other American industries now feeling more painfully than before the damage inflicted by low-wage imports. We have in mind, for example, steel, autos, machine tools, and a sadly lengthening list of other industries whose markets are being taken from them by imports produced at a fraction of the labor costs that prevail in the United States.

It is good for the textile industry, which for so long struggled with this problem alone and unaided, to know that many other important American industries are at last awakening to the problem of low-wage imports from abroad. The Trade Relations Council will serve as a valuable rallying point and general staff to co-ordinate the great effort, needed as never before, to obtain effective legislation aimed at developing the economic vigor of all free nations and still not sacrifice our own domestic industries.

A. H. McCallough

FTC issues rules for enforcement of textile products labeling law

LAST MONTH the Federal Trade Commission issued in final form its rules and regulations for enforcement of the new Textile Fiber Products Identification Act which will go into effect March 3, 1960. In public hearings in Washington last month, the FTC heard arguments from spokesmen for a wide variety of textile industry interests with regard to the final form of the rules. As they were released last month, the rules settled these disputed questions. Among the points that aroused the most interest and which are now cast into final form by the rules are these:

Rayon is defined as "a manufactured fiber composed of regenerated cellulose, as well as manufactured fibers composed of regenerated cellulose in which substituents have replaced not more than 15% of the hydrogens of the hydroxyl groups." (Rule 7).

In thus defining rayon, the FTC rejected the proposal of Courtaulds (Ala.) Inc., that it establish a new generic name for cross-linked cellulosic fibers such as the fibers made by Courtaulds under the tradenames, *Corval* and *Topel*. Courtaulds had urged that the term "Lincron" be accepted as a generic name for such fibers.

Three Percent Tolerance Allowed

In fabrics containing more than one fiber, deviations up to 3% are permitted. For example, where the label indicates that a particular fiber is present in the amount of 40%, the amount of such fiber present may vary from a minimum of 37% to a maximum of 43% of the total fiber weight (Rule 43).

The term "virgin" or "new" is restricted to textile fiber products composed wholly of "new or virgin fiber which has never been reclaimed from any spun, woven, knitted, felted, bonded or similarly manufactured product." (Rule 35). Under this rule, manufacturers of textile products who use reprocessed nylon, for example, can call their product "nylon" without qualifying it as "reprocessed" nylon, as long as they do not describe it as new or virgin nylon.

Imported textile fiber products must be labeled with the name of the country where such product was "processed or manufactured". The country where the imported product "was principally made shall be considered to be the country where such textile fiber product was processed or manufactured. Further work or material added to the textile fiber product in another country must effect a basic change in form in order to render such other country the place where such textile fiber product was processed or manufactured." (Rule 33).

The Rules provide further that, where the form of an imported textile fiber product is not basically changed, the country where such product was originally manufactured or processed shall be set out in the required information. As for example, a fabric imported into the United States as gray goods, but finished and dyed in this country must show the country where the fabric was manufactured or processed.

NEED HELP ON THE LAW? MTM's editors have set up a clearing house to help you find out what you must do to comply with the new fiber labeling law. Millmen, converters, and manufacturers of textile end products are invited to write us outlining their specific problems. We will give you prompt answers based on the most authoritative information available.

However, there is an important corollary to this rule. When a textile fiber product is made in the United States from imported textile fiber products, the country where such imported textile fiber products were manufactured need not be disclosed. For example, where a shirt is made in this country out of an imported fabric, the label need not disclose the country where the fabric originated.

Rule Eight Liberalized

Of special interest to fiber producers who in the future may wish to make application for the establishment of new generic names for fibers is the provision of the rules stating how this may be done. Rule 8 provides that an applicant for a new generic name shall give reasons "why the applicant's fiber should not be identified by one of the generic names" established by Rule 7.

This final form of Rule 8 is considered among fiber producers to be more liberal than the proposed rule to which strenuous objection was made. The proposed rule required the applicant for a new generic name to state that his fiber "cannot be identified by any of the generic names or definitions established in Rule 7."

The overall purpose of the Textile Products Identification Act is to require the statement in labels and advertising of the fiber content of textile products. Enforcement of the law is turned over to the Federal Trade Commission. Willful violation is punishable by fines up to \$5,000 and imprisonment up to a year.

In essence, the new law requires that labels be affixed to "household textile articles" including wearing apparel, costumes and accessories, draperies, floor coverings, furnishings, beddings, and other textile goods of a type customarily used in household regardless of where used in fact.

Such labels must state the fiber or fibers of which the product is made, designating with equal prominence each natural or manufactured fiber by its generic name in the order of predominance by weight if

(Continued on Page 33)

Allied Chemical has placed on its board the chemist who heads its broadened research effort. With a successful nylon now firmly established, Allied is looking with increasing interest at new possibilities in manmade fibers.



Glenn Nesty of Allied Chemical

IN AUGUST, 1935, while the midwest lay under its summer blanket of heat, a tall, slender young man with a shock of wavy brown hair worked day after day in the silent, deserted chemistry laboratory of the University of Illinois. His name was Glenn A. Nesty and he was a graduate student in chemistry working to take his Ph.D. degree. His labors were not on behalf of academic credits but for hard cash at the rate of 40 cents an hour—a wage the 24-year old chemist considered good and which he was glad to earn to help meet his expenses for the coming school year.

The useful task in which he was engaged was the production of lysine in small quantities. This amino acid was then in demand in small lots not only for the needs of the university but by other college laboratories and research outfits. Production of lysine and other chemicals in small batches for sale for experimental purposes was a mildly profitable sideline of the chemistry department at Illinois. It was the practice to hire graduate students to do this work thus providing them with employment during the long summer recess. As part of his assignment, Nesty made caprolactam in ten gram batches. By the time the summer was ended, he was, as he recalls it now, thoroughly tired of caprolactam.

It so happened, however, that the unforeseeable future would link him far more closely to caprolactam than his summer's labors. Some 24 years later, in the spring of this year, he stood before a gathering of technical and business reporters in Hopewell, Virginia. As vice president for research and development

of Allied Chemical Corp. he announced that his company had succeeded in developing, for the first time anywhere, a nylon based on caprolactam that had been accepted, after exacting tests, for use in tire cord by all the major American manufacturers of auto tires. He was also able to report on this occasion that Allied's nylon plant at Hopewell was successfully engaged to a large part of its 20 million pound capacity in producing caprolactam nylon for tire cord on a profitable basis. It was an achievement, he was careful to point out, that was the work of a large group of chemists, engineers and textile specialists working for Allied.

Although his colleagues at Allied were, of course, in agreement with him that the successful development of an outstanding caprolactam nylon was a group achievement, they also agree that Nesty deserves much credit as one of the pace-setting leaders in surmounting a formidable line of obstacles.

This man who became intimately acquainted with the intricacies of manufacturing caprolactam in ten gram batches as a graduate student had shown a remarkable aptitude for chemistry as far back as his high school days. Born in Indiana in 1911, the son of a Methodist minister who was also a skilled cabinet maker, Nesty was brought up in the little town of Brazil where he attended a two-room schoolhouse up to the fifth grade. He then transferred to the Central School in Van Buren Township and thereafter took a bus to get to the school some four miles from his home.

Nesty of Allied

On completing high school, he was awarded a scholarship that paid his tuition at De Pauw University in Greencastle, Indiana. At De Pauw, he majored in chemistry and made mathematics and physics his minor subjects. During his last year he served as an assistant to Professor William Blanchard who was both dean of the University and head of the chemistry department.

Today he remembers Dean Blanchard with special respect and affection as a remarkably good teacher who encouraged him to work hard and delve as deeply as possible into his chosen fields. Nesty's efforts as a student justified the older man's interest in him. In his junior year, Nesty had the highest scholastic standing in De Pauw's undergraduate school—a distinction that carried with it, as well as great honor, a stipend of \$100. The money he remembers came in handy for his board and clothing. His scholarship paid his tuition and other university fees, but Nesty earned enough in odd jobs to pay his living expenses during his four years at De Pauw.

Teaching While Learning

In 1934, graduating with "high distinction," Nesty was helped by Dean Blanchard to obtain a teaching fellowship at the University of Illinois—widely known for its excellent chemistry department. At Illinois, Nesty taught organic chemistry while carrying on intensive work for a doctorate degree in organic chemistry.

Nesty was not long at the University of Illinois before he formed a close professional and personal relationship with another distinguished chemist and teacher of chemistry, Dr. Carl Marvel. Nesty recognizes Dr. Marvel as one of the most significant influences in his professional life. One of the world's outstanding chemists and as a teacher of extraordinary ability—Dr. Marvel has developed many scientists who have become leaders in industrial research throughout the United States.

First Association with Allied

In the summer of 1936, while still teaching and and studying at Illinois, Nesty made his first association with Allied Chemical. He took a vacation job in the laboratories of the Atmospheric Nitrogen Corp., which later became part of Allied Chemical's Solvay Division. During the same summer, he formed another connection of a more personal nature. This was his marriage to Martha Brooks, who had been a fellow student at the University of Illinois.

The next year, he was awarded his Ph.D. degree in chemistry based on a dissertation reporting his work in the field of steroid chemistry. Now he was ready to work full time in industrial chemistry. His experience the summer before at Solvay had been so satisfactory that he went back to the company's Syracuse, New York, labs as a research chemist at \$250 a month. Although his early work for Solvay involved some activity in the field of high polymers, it was largely in processes for the production of acrylonitrile, styrene and butadiene.

Even as early as 1938, Allied, the "wholesale grocer" of the chemical industry as some have described it,—had an interest in getting into the fiber field. But in the years immediately following, the need was to concentrate on high priority projects for

the war effort and get as much production from its established tonnage chemicals as possible. In those years, Allied Chemical's role as the largest producer of nitrates was highly important to the country's manufacture of military explosives and more finished and specialized products such as fibers were pushed into the background.

By 1943, however, Allied Chemical saw the need to strengthen the company's forward-looking basic research and a small central research laboratory was established at Morristown, N. J. Glenn Nesty was among the six men selected from the best scientists on the company's staff to work in the new lab, and was made a group leader in exploratory activity in the field of high polymers aiming at development of usable textile fibers.

Back to Caprolactam

As soon as the war was over and building materials restrictions eased, Allied Chemical built a new laboratory at Morristown. With an expanded staff, work on fiber forming polymers was greatly speeded up. Nesty was serving then as an assistant director of the new laboratory. In this position, he was more and more absorbed in the long-drawn-out work of developing a caprolactam monomer of high purity, of successfully polymerizing the monomer and of spinning the caprolactam polymer into a nylon fiber. In this effort, Nesty, as he himself is most insistent on making clear, was only one of many who worked together in a task that extended itself over more than a decade. Working shoulder to shoulder with him, Dr. George Joris developed the monomer system, under the general supervision of Forbes Silsby, vice president in charge of research at the time.

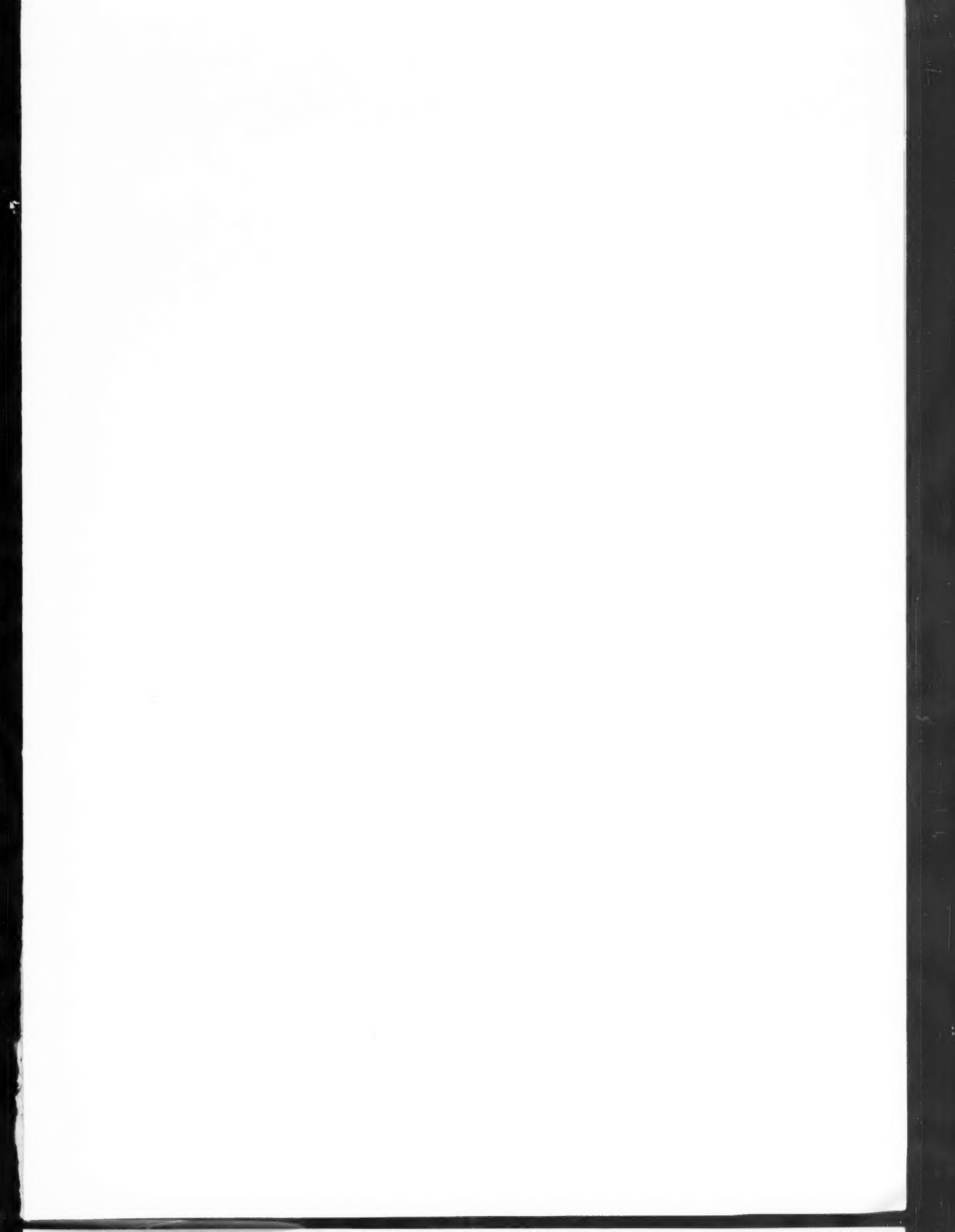
Why Nylon?

At this point in our history of Glenn Nesty and Allied Chemical's entry into the fiber field it might be well to take time out to answer a question that has been often asked by people in and out of both the chemical and manmade fiber industries: Why did Allied Chemical, the "wholesale grocer" of the chemical industry decide to make so difficult, so necessarily highly finished and so complex a product as a textile fiber? And, having elected to do so, why did it hit upon caprolactam nylon?

A succinct answer might be that forthcoming from Nesty and other workers at Allied Chemical who labored with many heartbreaking disappointments through the long years to find out how to make a good nylon out of caprolactam. Their answer is that back in 1947 or thereabout, the task looked a lot easier than it turned out to be. A more complete answer, but perhaps no more accurate, is that it seemed that Allied Chemical had much to gain from making a nylon fiber out of caprolactam. Caprolactam seemed to be a useful and profitably marketable product for the company to make out of a variety of raw materials which it was already producing at a profit—phenol of exceptional purity, for example, was one of them. Allied management figured that if it could make a profit (as it had done for so long) producing basic chemicals, it could make another profit in the further processing of some of these chemicals and turning out finished end products such as manmade fibers.

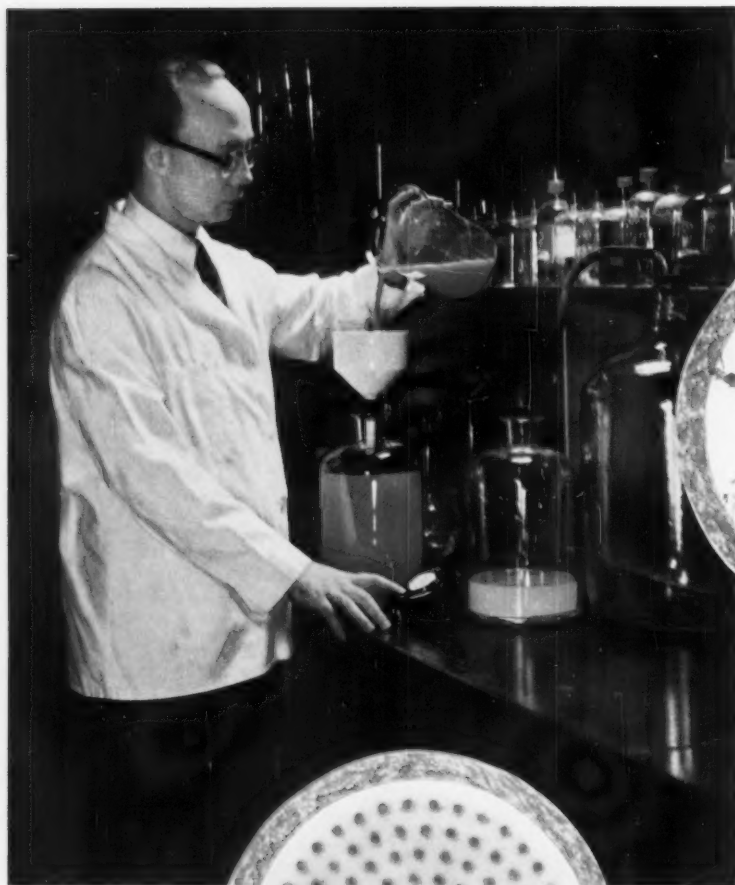
Caprolactam nylon rather than the more familiar nylon 66 (such as DuPont and Chemstrand produce) was chosen because, as Nesty points out, Allied Chemical felt that it was in an unrivaled position to make

(Continued on Page 35)



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C



A Fine, uniform particle-size of typical Carbanthrene Vat Dye is shown in this photomicrograph (X20,000). Particles do not tend to lump together.

B Clean results in dyeing are forecast by sedimentation filter test. Typical Carbanthrene Dye passed through Buchner funnel leaves a minimum of residue on filter paper.

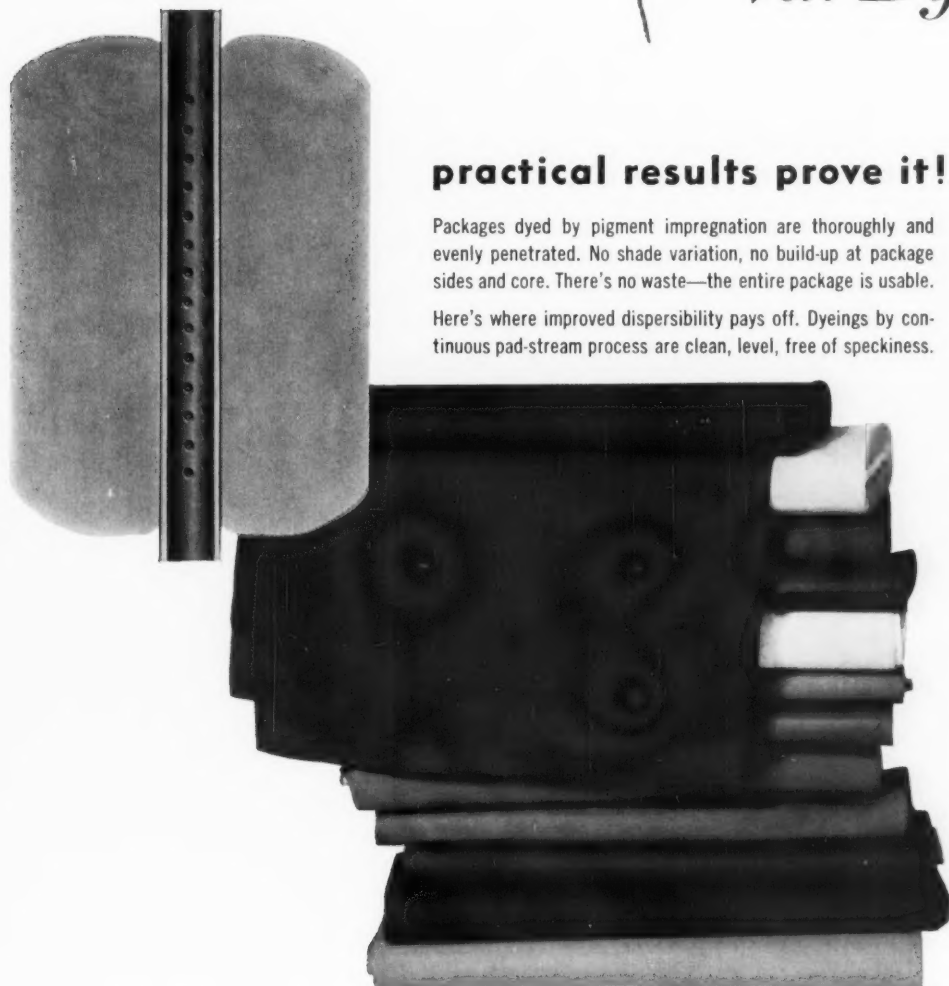
C Dilute pigment filter test is toughest of all. Leading mills require vat dye solutions to filter through in one minute. Virtually all of the modern Carbanthrene Dyes pass in less than thirty seconds!



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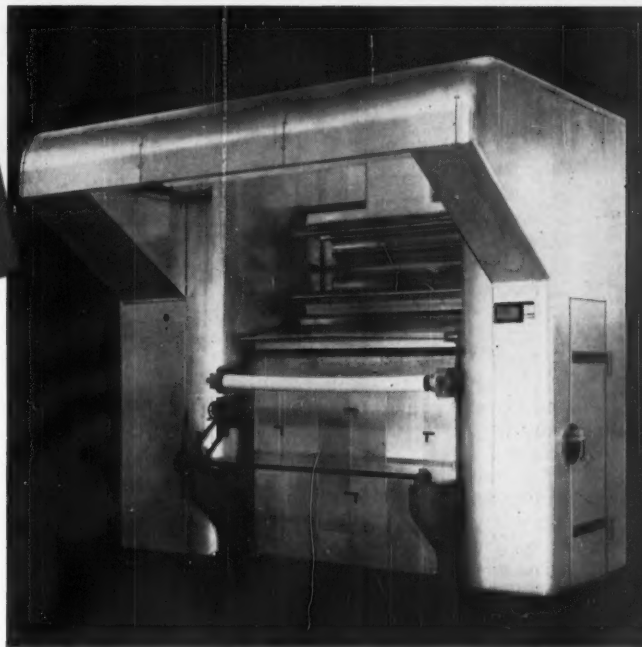
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How to dye

Zefran-wool blends

PREPARATION of fabrics of Zefran and wool parallels the preparation of all wool fabrics with one exception—fulling of fabrics containing colored yarns.

Normal wool scouring or dry cleaning methods are used to prepare fabric blends of Zefran and wool.

Since Zefran shows little or no tendency to felt, maximum fulling shrinkage in a fabric blend of Zefran and wool is usually obtained within 30 to 60 minutes depending on the percentage of Zefran; longer fulling times have little effect.

Either acid or alkaline fulling procedures may be effectively employed to full fabric blends of Zefran and wool which are to be piece dyed. A normal wool scour follows fulling.

Blends of Zefran and wool containing colored yarns should be processed with care during fulling. In many instances, normal alkaline fulling promotes color bleeding with subsequent staining of Zefran; therefore, it is not recommended. Acid fulling employing 3.0 ounces per gallon Blancol N* and 1.0 ounce per gallon of acetic acid (56%) combined with selected dyestuffs for both Zefran and wool is used to satisfactorily full fabric blends of Zefran containing colored yarns. Acid fulling is followed by a detergent scour such as 2% Kryo AC** and 1% sodium carbonate at 110°F for 20 minutes.

Selected dyestuff classes for both Zefran and wool components are necessary. These dyestuff classes when combined with acid fulling permit satisfactory wet processing of fabric blends of Zefran and wool containing colored yarns. For wool, most chrome and acid metallized dyestuffs are suitable; for Zefran, vat dyestuffs are used for light to medium shades while heavy shades are obtained with liquid sulfur dyestuffs. Neutral premetallized dyestuffs up to approximately 0.2% may also be used for light shades. It is recommended that these specific dyestuffs be checked under simulated mill conditions to insure satisfactory performance.

Carbonizing

Fabrics containing blends of Zefran and wool may be carbonized with either sulfuric acid or aluminum chloride. Whenever possible, fabric blends of Zefran and wool which are to be piece dyed should be carbonized before fulling since this sequence allows a more thorough neutralization of the fabric prior to dyeing.

When carbonizing follows fulling and scouring operations, the fabric should be thoroughly neutralized before dyeing. This may be accomplished in a string washer by rinsing, treating with sodium carbonate, and rinsing until neutral.

Dyeing

Several methods are available for union dyeing fabric blends of Zefran and wool. Generally, neutral

premetallized colors are applied to Zefran for light to medium shades with direct colors used for darker shades. Acid metallized, acid milling or chrome dyestuffs are normally applied to the wool component.

In addition to union shades, a limited range of tone-on-tone and color and white effects are available on blends of Zefran and wool. Both Zefran dyed-wool reserved and wool dyed-Zefran reserved procedures are outlined.

Piece Dyeing with Neutral Premetallized and Acid Milling, Chrome or Acid Metallized Dyestuffs

Light to medium shades are obtained on blends of Zefran and wool by dyeing Zefran with neutral premetallized and wool with acid milling, chrome or acid metallized dyestuffs.

One method is to dye the blend in a neutral bath containing the neutral premetallized acid colors for Zefran and acid milling colors for wool at 180° to 200°F for 30 minutes. The temperature is lowered to 175°F to allow the addition of 2.0% to 5.0% ammonium sulfate and the temperature is raised to a boil and dyeing continued for 60 minutes. A rinse or light scour follows dyeing.

A second method of obtaining light to medium shades on a blend of Zefran and wool is to substitute chrome for acid milling dyestuffs in the above procedure plus a normal after chrome treatment following dyeing.

A third method utilizes acid metallized colors for the wool component. Basically, wool is dyed with acid metallized colors. The fabric is then neutralized and the Zefran is dyed with neutral premetallized colors in a fresh bath containing 2% Avalon IW†.

Piece Dyeing with Aftertreated Direct and Acid Milling or Chrome Dyestuffs

In the application of direct colors to fabric blends of Zefran and wool, the amount of direct dyestuff that is absorbed by the wool is controlled primarily by time, temperature and pH. Very little direct color is absorbed by the wool when dyeing is conducted in a neutral or slightly alkaline bath. As the pH is lowered and the temperature approaches a boil, the wool actively competes with the Zefran for the direct colors.

For example, one method of dyeing medium to heavy shades on fabric blends of Zefran and wool consists of dyeing Zefran with direct colors in a neutral bath at a temperature of 180° to 200°F with the addition of salt. After Zefran has been dyed, the temperature is lowered to 170°F and the acid milling colors are added for the wool component. The temperature again is raised to 200° to 205°F to complete the dyeing of wool. Improved colorfastness is obtained by an aftertreatment of 2.0 to 3.0% Gycofix 67 and 1.0% acetic acid at 140°F for 30 minutes.

* General Aniline & Film Corp.

** Procter & Gamble Co.

† Farbenfabriken Bayer.

Another method of obtaining medium to heavy shades is to substitute chrome for acid milling dyestuffs for the wool component. The above procedure is utilized with the addition of an after chrome step prior to the Gycofix 67 aftertreatment.

Piece Dyeing—Zefran Reserved and Wool Dyed

Selected acid metallized colors may be utilized effectively to dye wool and reserve Zefran. A pretreatment with reserving agents such as Eulan CN or Mitin FF effectively minimizes staining of the Zefran. Lighter shades based on Acid Yellow 54, Acid Red 212, and Acid Blue 160 dye wool a full range with practically no staining of the Zefran.

Piece Dyeing—Zefran Dyed and Wool Reserved

Medium shades are obtained with selected direct dyes on Zefran which leave wool reserved. These colors are applied to Zefran at a temperature of 160°F from a slightly alkaline dyebath. Light shades are obtained utilizing neutral premetallized dyestuffs on Zefran in conjunction with Avalon IW. The neutral premetallized colors are applied to the Zefran in a bath set with 2.0% Avalon IW at a pH of approximately 8.0 with ammonia. The dyeing is started at a low temperature, the temperature gradually raised to 180°F and dyeing is carried out at 180°F for 60 minutes.

Wash-Wear Bulletin

Hatch Textile Research, Inc., in its newly-issued Laboratory Bulletin No. 3, reports it recognizes four "Wash and Wear" classifications: hand wash, drip dry; machine wash, drip dry; machine wash, hang dry; and machine wash, tumble dry (also called automatic "wash and wear"). In order to be considered as wash and wear, fabrics or garments must earn good ratings for color fastness and shrinkage, and require little or no ironing after five cycles of one of the prescribed tests. *For copies of Bulletin No. 3 write the editors.*

Guide for Yarn Dyeing

Franklin Process Co. has issued a booklet to serve as a guide for buyers of yarn dyeing and colored yarns. The booklet, "What You Should Know When Ordering Yarn Dyeing or Colored Yarns," provides basic data and suggestions on conditions to observe when placing purchase orders, as well as what to expect in regard to weight, billing, shipping, put-ups, and special services.

Franklin Process also has prepared a new color card detailing 40 "bonded colors" of the recently developed fiber-reactive class. The bonded colors are described as the

type which, when applied to yarn, form an actual bond with the cellulosic fiber and thus result in exceptional fastness to washing and light. Bonded colors, available in a complete range, are not fast to bleaching. *For copies of the buying guide and the bonded color card write the editors.*

Textile Chemicals Booklet

Apex Chemical Co., Inc., has issued a new booklet, "101 Ways to Serve You," which describes its chemicals available for textile processing. *For free copies write the editors.*



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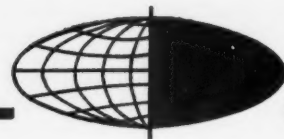
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TEXTILE NEWS



World Wide

SELF-SUFFICIENCY IN TEXTILES sought by the Philippine Islands is gaining ground impressively. The Riverside Manufacturing Corp. is planning to spend \$10 million to boost the number of spindles from 42,000 to 60,000 and looms from 550 to 2,000. Riverside president Ernesto Tan-Chi says that in five years his country should not only be self-sufficient in textiles but in a position to export a bit.

SOME FIRMS ARE PLACING ORDERS for textile machinery and equipment with Japanese manufacturers. Philippine sources say sales terms there are more favorable than in the United States. Among Philippine mills ordering in Japan are Artex Development (for \$4 million worth of spindles and looms), Central Manufacturing, Lirag Textile, Phillip Manufacturing and General Textile Mills.

BRITISH MANMADE FIBER OUTPUT continues to grow. Imperial Chemical Industries is building a plant to make acrylonitrile at its Casels Works, Billingham, with production set for the end of the year. Products will be acrylic fibers, resins and the Butakon range of specialty synthetic rubber products.

CHEMSTRAND'S ULSTER ACRILAN PLANT at Coleraine, was recently opened by the Duke of Edinburgh; it cost \$10 million. And Courtaulds, Ltd., revealed that it has begun turning out polypropylene fiber yarns at its affiliate's Little Heath, Coventry, plant. British Celanese, the partial affiliate, was said to have developed a way of making high-tenacity yarn with exceptional resistance to abrasion.

THE WORLD TURNED UPSIDE DOWN: For the first time since the middle of the 18th Century, the United Kingdom imported more cotton yarn than she exported—550,000 pounds more, to be exact. The present British Government has been trying to streamline the cotton textile industry. Employers and unions have just decided on special unemployment compensation for mill workers until they find new jobs.

THE UNITED STATES AND RUSSIA have become the best markets for an Italian woolen company, Lanerossi, of Milan. Each country has been

taking about 21% of the firm's output of fabrics and yarns, with the Russians more interested in the yarns.

JAPAN HAS RAISED TEXTILE EXPORT GOALS for the present fiscal year ending in 1960. An overall rise of 13.7% was set by the Textile Export Council. For rayon filament yarn, the goal is \$13,650,000 worth, up 45%; rayon filament fabrics, \$68.4 million, up 14%; rayon staple, \$7.3 million, up 13%; spun rayon yarn, \$8,141,000, up 30%; spun rayon fabrics, \$144 million, up 12%, and nylon fabrics, \$33,308,000—a jump of 104%.

A NEW IMPORT THREAT TO U. S. is posed by Japanese men's suits. Imports so far have been small. But American traders fear that the Japanese will stage an export drive soon in order to get into the best position for the resultant U. S. curbs (or Japanese export ceilings). The Japanese, who are farsighted if nothing else, feel that it would be better to bargain over trade controls after exports have reached a high level than before they have a chance to go up.

JAPANESE AND OKINAWAN INTERESTS are understood to be grouping to begin production of furfural, one of whose uses is in making nylon. Furfural would be produced on Okinawa, largely from bagasse, a sugar-cane residue. Japan has been importing furfural from the U. S. and Italy.

WORLD'S LOW-COST TEXTILE COUNTRIES are getting together to try to stave off import curbs imposed by certain higher-cost textile nations. This was announced at Geneva by an Indian textile expert, Sri T. Swaminathan, who is also Commissioner of General Export Affairs for Europe. Textiles under study were cotton, wool, jute, and hemp. Along with India, there were 13 countries; Brazil, Burma, Cambodia, Ceylon, Chile, Cuba, Malaya, Rhodesia, Ghana, Indonesia, Pakistan, Peru and Uruguay. The General Agreement on Tariffs and Trade will be asked to take up this matter for 1960-61, Mr. Swaminathan said.

SWEDEN HAS NEW PROCESS which is said to make wool washable and crush-proof. The process, tested by the Swedish Textile Research Institute, has not been used commercially but will be sold under the name, No-Press.

MACHINERY and EQUIPMENT SECTION



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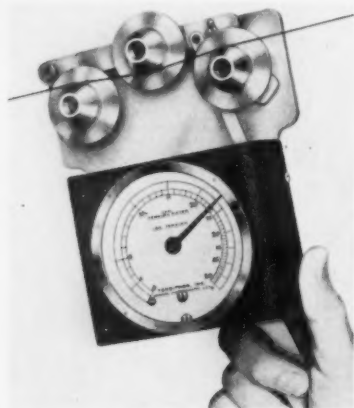
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NEW

MACHINERY EQUIPMENT

Kryton Spinning Ring

The Whitin Machine Works is now producing a new spinning ring said to provide satisfactory use of traveler speeds in the range of 7,000 to 8,000 f.p.m. The Kryton ring is characterized by a different shape, than that used on conventional rings, and has a new finish. The company reported that correct breaking-in procedure is extremely important in providing maximum wear life for the ring and to reduce the number of ends down in spinning. With the new procedure, the Kryton rings can be broken in within 120 hours, and in most instances in a much shorter period of time. *For further information write the editors.*



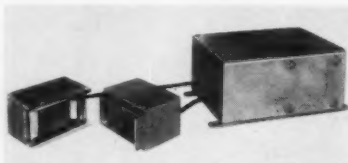
New Tension Meter

Tension Meter

A new tension meter with a range as high as 50 pounds for checking on moving yarns, wires, sheets, tapes and other filaments and also flat materials, has been developed by Tensitron, Inc. The meter can be used and readings taken while the wires or other materials are running. It is not necessary to stop the machine to make a tension reading. The instrument's gage mechanism averages the readings for steady observation of the average tension. *For further information write the editors.*

Electric Safety Lock

A new electric safety lock said to have almost unlimited application is now available from Lindly & Co. The new lock, for which patent application has been made, is a compact package with great strength



Lindly Safety Lock

for its size. The strength is maintained by two compatible electric fields generated when the current is switched on. In other words, it works on the principle of a split electric transformer. As long as electricity activates the two fields, the lock is virtually unbreakable. When the current is turned off the magnetic fields broken, the two halves of the lock separate to permit motion.

The new lock is expected to find popular applications as an operator guard on machinery, and as door locks for safety and security. *For further information, write the editors.*

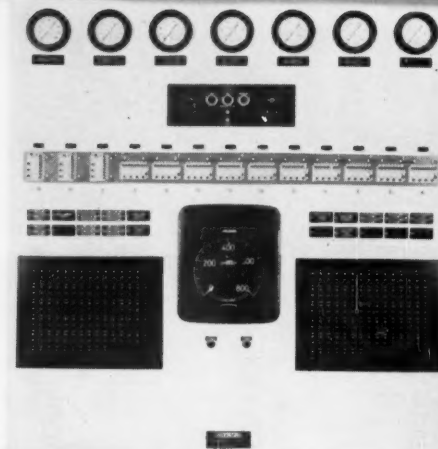
New Leno Weave Heddle

Steel Heddle Mfg. Co. is introducing its Stehedco duplex doup heddle for leno weavers, a patented flat steel heddle said to provide complete freedom of movement. Even the friction usually caused by the rubbing of the needle between the standards is greatly reduced by the welded construction of the new heddle, which provides a positive opening for the needle. The heddles have been tested in a number of high production mills. *For further information write the editors.*

Warp Measurer, Marker

Trumeter Co. Ltd. is offering a warp measuring and marking device for use on slasher sizing and beaming machines to measure and mark distinctly, at pre-determined lengths, in continuous process. The device consists of the company's standard batch unit (model 5028) coupled to a suitable roller on the sizer or beaming machine. It is coupled electrically to the marking unit. *For further information write the editors.*

Trumeter Warp Measurer



Foxboro Alarm Scanner

Automatic Scanning

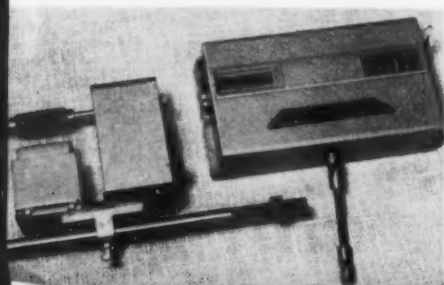
Automatic scanning of several hundred process measurements at speeds up to 5 points per second and higher is reported provided by the new Alarm Scanner manufactured by The Foxboro Co. The panel-mounted system is said to be particularly applicable where warnings of critical high or low measurements are essential, such as in synthetic fiber extrusion processes. Features of the system include: an auto-manual switch for manual or automatic scanning; manual switching to a precision indicator or recorder; variable scan rate; alarm setting repeatability to ± 0.05 millivolts; and automatic reset of alarm light when audible alarm is acknowledged and measurement returns to normal. *For further information write the editors.*

New Strapping Hand Tool

Stanley Steel Strapping, division of the Stanley Works reports its new OH-10 tightener is the only heavy-duty friction wheel steel strapping hand tool on the market for use with cold rolled $1\frac{1}{4}$ -inch by .031 and .035 steel strapping. The latest addition to the company's "O" series tighteners was designed to meet special requirements—light weight yet strong enough to stand up under the usage required in the production line strapping of coils and sheet metal. The OH-6, companion heavy duty tightener, takes $\frac{3}{4}$ -inch by 0.28 and .035 cold rolled steel strapping. *For further information write the editors.*

New Shuttle Eye

Draper Corp. has developed its No. 380 shuttle eye, for providing faster, more positive threading with many synthetic yarns. Filling is positively trapped and held at the side eye opening, while a special trap prevents filling from whipping at the back of the eye. A similar, and interchangeable cotton-type eye is also available. *For further information write the editors.*



Fabric Labeling Act

(Continued from Page 20)

the weight of such fiber is 5% or more of the total fiber weight of the product.

The law also requires that in advertising textile fiber products the use of a fiber trademark shall require a full disclosure of the fiber content information as required by the Act in at least one instance in the advertisement. Where a fiber trademark is used in advertising, the generic name of the fiber must appear "in immediate proximity and conjunction with each other in plainly legible and conspicuous type or lettering at least once in every advertisement."

List of Generic Names

The following is a list of the generic names of fibers and their definitions as established by Rule 7 in its final form.

Acrylic: a manufactured fiber in which the fiber-forming substance is any long chain synthetic polymer composed of at least 85% by weight of acrylonitrile units ($-\text{CH}_2-\text{CH}-$).



Modacrylic: a manufactured fiber in which the fiber-forming substance is any long chain synthetic polymer composed of less than 85% but at least 35% by weight of acrylonitrile units ($-\text{CH}_2-\text{CH}-$).



Polyester: a manufactured fiber in which the fiber-forming substance is any long chain synthetic polymer composed of at least 85% by weight of an ester of a dihydric alcohol and terephthalic acid ($\text{p-HOOC}-\text{C}_6\text{H}_4-\text{COOH}$).

Rayon: a manufactured fiber composed of regenerated cellulose, as well as manufactured fibers composed of regenerated cellulose in which substituents have replaced not more than 15% of the hydrogens of the hydroxyl groups.

Acetate: a manufactured fiber in which the fiber-forming substance is cellulose acetate. Where not less than 92% of the hydroxyl groups are acetylated, the term triacetate may be used as a generic description of the fiber.

Textile Essay Contest

Members of the graduating class of seven textile schools are invited by the Textile Veterans Association, New York City, to write essays on, "A Program For Profitable Textile Progress." Each school will select from among its own entries one which presents the most practical ideas toward accomplishment of such a program. The one chosen will be awarded a bronze medallion plus a \$50 U. S. Savings Bond. Participating colleges include: Alabama Polytechnic Institute, Clemson Textile School, Georgia Institute of Technology, Lowell Technological Institute, New Bedford Institute of Textiles & Technology, North Carolina State College and Philadelphia Textile Institute. The best essay among those entered by the colleges will be selected by a panel of judges, including Alfred H. McCollough, publisher of Modern

Saran: a manufactured fiber in which the fiber-forming substance is any long chain synthetic polymer composed of at least 80% by weight of vinylidene chloride units ($-\text{CH}_2-\text{CCl}_2-$).

Azlon: a manufactured fiber in which the fiber-forming substance is composed of any regenerated naturally occurring proteins.

Nytril: a manufactured fiber containing at least 85% of a long chain polymer of vinylidene dinitrile ($-\text{CH}_2-\text{C}(\text{CN})_2-$) where the vinylidene dinitrile content is no less than every other unit in the polymer chain.

Nylon: a manufactured fiber in which the fiber-forming substance is any long chain synthetic polyamide having recurring amide groups ($-\text{C}-\text{NH}-$).



as an integral part of the polymer chain.

Rubber: a manufactured fiber in which the fiber-forming substance is comprised of natural or synthetic rubber.

Spandex: a manufactured fiber in which the fiber-forming substance is a long chain synthetic polymer comprised of at least 85% of a segmented polyurethane.

Vinal: a manufactured fiber in which the fiber-forming substance is any long chain synthetic polymer composed of at least 50% by weight of vinyl alcohol units ($-\text{CH}_2-\text{CHOH}-$), and in which the total of the vinyl alcohol units and any one or more of the various acetal units is at least 85% by weight of the fiber.

Olefin: a manufactured fiber in which the fiber-forming substance is any long chain synthetic polymer composed of at least 85% by weight of ethylene, propylene, or other olefin units.

Vinyon: a manufactured fiber in which the fiber-forming substance is any long chain synthetic polymer composed of at least 85% by weight of vinyl chloride units ($-\text{CH}_2-\text{CHCl}-$).

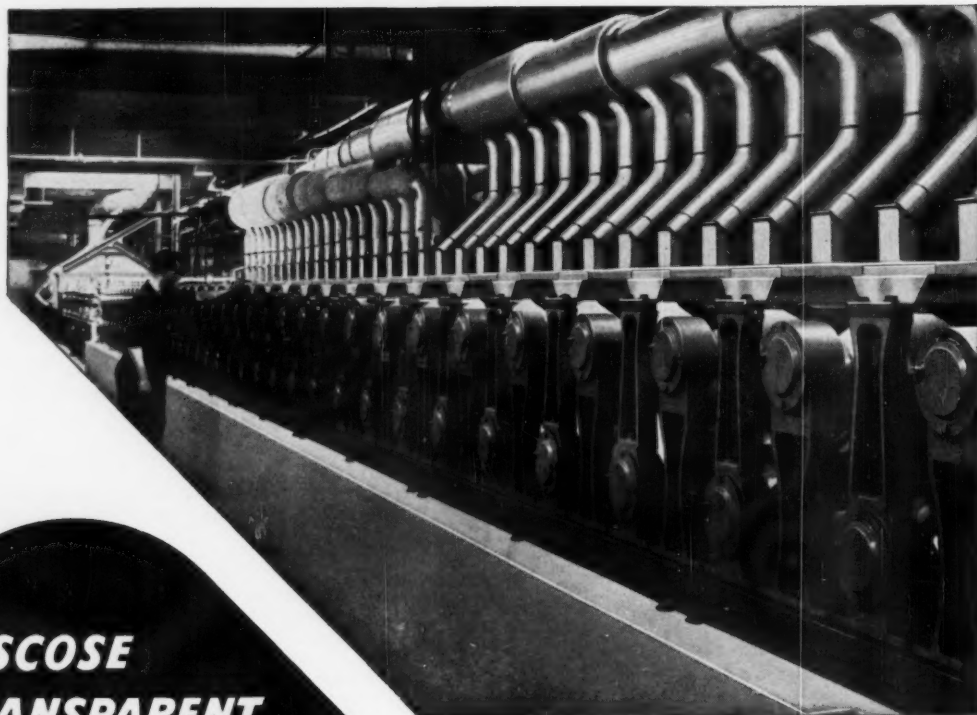
Metallic: a manufactured fiber composed of metal, plastic-coated metal, metal-coated plastic, or a core completely covered by metal.

Glass: a manufactured fiber in which the fiber-forming substance is glass.

Textiles, and Hilda A. Wiedenfeld, executive director, Textile Distributors Institute.

Sales Agent Appointed

Hartford-Greenville Division, Standard Screw Co., has appointed Dunson & New as its exclusive agents. Hartford-Greenville, which manufactures Hartford spindles, bobbin holders and other textile machine parts, for many years maintained its own sales force. Under the new program Dunson & New will absorb the present Hartford force. In announcing the change, A. R. Andrews, general manager of Hartford-Greenville, said that it will enable the company to "apply more emphasis to engineering service and development. The entire sales force will be in close contact with the home office, and our engineering staff will be constantly available."



Photograph by courtesy of Transparent Paper Limited, Bury

VISCOSE TRANSPARENT film . . .

at nearly 7 feet a second

ANOTHER EXPERT JOINS DOBSON & BARLOW

We announce with great pleasure the appointment to our technical staff of Mr. E. J. Kirkman specialist with 20 years global experience of manufacturing techniques in viscose film production and in all the various adaptations of film coating. His unmatched knowledge will add strength and lustre to our consultative services on modern equipment and operational efficiency.

INCREASED PRODUCTION

Designed and manufactured in close collaboration with the industry, Dobson & Barlow's new Viscose Transparent Film Machine, shown here in operation, produces 55" wide film in 1,000 lb. finished reels. The machine is designed to run at speeds up to 400 feet per minute. A number of these machines have been supplied to the Bridge Hall Mill of Transparent Paper Limited, Bury, for their re-equipment programme. These high production figures are made possible by 8-pass treatment tanks, greatly accelerated cylinder drying and improved reel tensioning.

IMPROVED QUALITY WITHOUT WASTE

Specially prepared roller surfaces, a new drying system and the careful attention given to the finish of all contact parts ensures exceptionally smooth film of regular thickness, and virtually no waste.

NEW PROCESSING ECONOMIES

An oil-immersed gear box drive to each treatment tank, improved arrangement of rollers, protection against corrosion, and general machine accessibility make definite economies in maintenance costs.

DOBSON & BARLOW MACHINERY SALES LIMITED

BRADLEY FOLD, BOLTON, ENGLAND

WE INSTALL A COMPLETE PLANT OR SUPPLY AN INDIVIDUAL MACHINE.

Nesty of Allied

(Continued from Page 22)

caprolactam of an unprecedented purity. In short, it had the scientific personnel and materials already in its divisional organizations. Phenol, an important raw material for caprolactam was available from the company's Barrett division; ammonia from its Nitrogen division, one of the company's early successes in industrial chemistry; and sulfuric acid came from Allied Chemical's General Chemical Division.

And thus caprolactam nylon was chosen, even though the choice made it necessary for Allied Chemical to equip itself with an adequate technology, not hitherto existing in the United States, for the production of this type of nylon. Allied set out to discover for itself, by its own engineering work, without recourse to aid from others (German sources, for example) how to turn caprolactam monomer first into polymer and then to spin the polymer into nylon that could do as well if not better in textile and other end use performances than the established nylon 66.

The task, to understate the matter, was not an easy one. There were setbacks, disappointments, and delays. Spinning the fiber was particularly difficult. Well-established techniques for spinning other fibers did not work for Allied Chemical's product. New methods, requiring the expenditure of a great deal of money and a great deal of engineering skill, had to be developed. A plant of 20-million pound capacity constructed at Hopewell adjoining Allied Chemical's monomer plant ran into such difficulties in getting under way on commercial production of acceptable nylon, that it was referred to by competitors as the only "20-million pound pilot plant in the manmade fiber industry."

Search for Tire Cord

Recalling these trying times now, people at Allied Chemical say that in the effort to overcome the manifold difficulties, Glenn Nesty was in the thick of things. In 1955, he was made a vice president, transferred to the New York head office and allowed to concentrate on the nylon project. He was, as he himself has quipped, "vice president in charge of nylon."

As early as 1950, he had started research that would lead to a successful high-tenacity caprolactam yarn for use in tires and other industrial applications. This possibility for Allied Chemical caprolactam nylon was widely regarded as a will o' the wisp with virtually no chance of success. But the research men persevered in developing a nylon 6 that would more than measure up to the exacting standards for nylon tire cord set by Akron's tire makers.

The work was difficult and long-drawn-out. It required not only strenuous research and engineering effort, but an equally strenuous and sharply pointed marketing approach. The tire manufacturers in the middle west had to be consulted and they had to be sold. The way to sell them, Nesty realized, was to find out what they required of a nylon tire yarn and then give to them even more.

In this effort, the technical men were enormously helped by the men with a specialized knowledge of yarns and fibers for textile uses headed by George H. Hotte, a Massachusetts Institute of Technology man who had joined Allied Chemical in 1953 as head of its



MARKETING MAN—George H. Hotte, deeply experienced in fabric development and textile marketing, is in charge of Allied's fiber sales and service.

fiber sales and service. Hotte had come from Tennessee Eastman where he had built a reputation as a fabric technologist skilled in giving customers in the volatile fabric manufacturing industry what they wanted in profitable new ideas for fabrics.

By late 1958, Nesty and his fellow workers arrived at a point where they knew that they had an acceptable tire yarn. By April of this year, as already mentioned in this report, they were able to tell the business press that the plant at Hopewell was in smooth, fool-proof production of tire cord up to "a major part" of its capacity, as George Hotte explained.

Although tire cord thus is a market of dominant importance in the thinking of Allied Chemical's nylon people at this writing, it is by no means the only end use the company has found for its "Caprolan" as it is trade named. George Hotte and his team of textile technologists and marketing men at Allied Chemical's smart new midtown fiber sales office have explored a wide range of other uses. So far they have achieved success in two major types of continuous filament yarn in addition to tire cord. The first of these is a regular tenacity nylon in a range of deniers from 200 up to 2100 characterized by a high degree of whiteness and an exceptional receptivity to dyes. Textured Caprolan yarn has been successful in upholstery and carpet fabrics.

The second aspect of the company's marketing effort is its Caprolan "heavy yarns" ranging from 2100 denier up to 15,000 which have achieved good acceptance in cordage, fire hose, webbings and similar industrial applications. Recently the company has moved back into production of a limited quantity of staple fiber with plans for expansion in this form as markets are opened.

In April, Nesty became a director of the corporation. Although his duties both as director and vice presi-

(Continued on Page 38)

The man from Du Pont lends a hand in the cutting room

Meet George Bollinger (left) of Du Pont. He's a Technical Service Representative in our Fabrication Group. That's quite a title, and here's what it means . . .

George is one of a group specializing in developing the best techniques and materials for tailoring garments of our fibers. These men know cutting, sewing and garment finishing, just as other Du Pont Technical Service Representatives know knitting, weaving and fabric finishing. George (shown here with Louis Scalise, Vice President and head designer at Witty Bros., and head of Custom-Edition Clothes by Scalise) and his cohorts work with apparel manufacturers to help insure that the consumer gets all the performance advantages made possible by Du Pont fibers. Achieving true wash-and-wear performance has, of course, been a major project.

Last year, over 1,800 apparel manufacturers received Technical Information Bulletins from the Fabrication Group—and over 500 attended the Group's ten educational clinics.

What it all adds up to is this: Du Pont helps the manufacturer to produce garments that will sell and satisfy . . . and this helps our customers sell more fabrics made with Du Pont fibers.

**From raw fibers to retail sales
... Du Pont helps build profits for you**





PRODUCT and PROCESS NOTES FROM DU PONT

"Dacron"* Type 61 polyester staple** is specifically designed for industrial uses requiring the physical and chemical properties of conventional "Dacron" Type 54 *plus high shrinkage*.

In the presence of hot air or hot water, "Dacron" Type 61 will shrink approximately 45%. This property makes it possible to produce non-woven felts of 100% "Dacron". "Dacron" Type 61 staple fibers are carded to form a batt which is needle-punched to interlock the fibers. This needled batt is then exposed to hot water or hot air to produce a felt.

Blended with wool in woven felts, "Dacron" Type 61 has sufficient shrinkage to permit it to ride and pack with wool during fulling and assists in closing and stabilizing the felt fabric.

Filtration, wicking, sealing, cushioning, spacing and lubrication are among the industrial uses for felts which benefit from the unique combination of properties possessed by "Dacron" Type 61.

"Civona"* rayon**—Your favorite lady's hat this summer may be made of "Civona", the latest addition to Du Pont's collection of rayon fashion yarns. "Civona" yarns are crisp, lofty and readily dyeable in a full range of seasonal colors. Currently available in only one count, 600-20 dull, "Civona" rayon is also being evaluated for use in draperies, casements, dresswear and toy-plush fabrics.

"Taslan"* textured yarn**—Several hundred new fabrics and garments utilizing "Taslan" textured yarns were shown recently to the press at a meeting in the Du Pont office in the Empire State Building. A number of the interesting items displayed were of foreign origin. Special attention was focused on the novelty yarns made possible by multi-end and variable-feed texturing. It was forecast that textured yarns of all types would grow to a 100-million-pound market by 1964, with "Taslan" accounting for about 25% of the total.

*Du Pont's registered trademark for its polyester fiber

**Du Pont's trademark for its hollow-filament rayon fashion yarn

***Du Pont's registered trademark designating textured yarns made in accordance with quality standards set by Du Pont



BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY

Tariff League Adopts New Name

A new name, "Trade Relations Council of the United States," has been adopted by the American Tariff League. Along with the change of name, the former Tariff League has created a new post, that of executive vice president, which will be filled by Richard H. Anthony, who has served as executive secretary of the group since 1946. Ralph A. Butland, president of the former Tariff League, has been elected chairman of the new Trade Relations Council's board of managers. The reorganization became effective July 1.

In explaining the decision of the Tariff League to reorganize and choose the new name of Trade Relations Council, Butland stated that patterns of international trade have undergone drastic changes in recent years. Members of the Tariff League, he said, decided that a new organization with a broader program, reflecting their recognition of these changes, would better serve the interests of mutually satisfying foreign commerce.

Butland emphasized that the new TRC would continue to stress the prime importance of policies that will maintain domestic production in the interest of a diverse and healthy American economy, varied and extensive job opportunities, and a strong national security base.

Butland said the TRC plans to undertake a series of special fact-finding projects covering foreign and domestic wage differentials; the Communist economic offensive; the rise of regional trading systems; disruptive trade practices here and abroad; cartels and dumping; the General Agreement on Tariffs and Trade; U. S. foreign investment policy; and U. S. Government purchasing.

From these studies will emerge the materials for the TRC's major mission, "a broad-based program of public information to alert Americans to the facts about world trade and to principles governing trade



RICHARD H. ANTHONY (left) newly elected executive vice president of the Trade Relations Council, accepts congratulations from Ralph Butland, board chairman of the group which was formerly the American Tariff League.

economics."

Unlike its predecessor, the TRC will eventually be headed by a full-time, salaried president charged with implementing the policy decisions of the elected Board of Managers. Butland will continue to serve as president until the new salaried job is filled. He said a special committee had been appointed to recommend possible candidates. It is doubtful that the post will be filled before TRC's first annual conference in the fall.

Fabric Output Down in '58

U. S. production of cotton, wool, man-made fiber and silk textiles in 1958 totaled 11,607,009,000 linear yards, excluding automobile fabric, according to The Association of Cotton Textile Merchants' "Ten Years of Broad Woven Fabrics." The total was 4.1% less than the 12,101,718,000 yards for 1957, and down 7.2% from the 12,507,715,000 yards averaged annually for the 1948-57 decade.

Output of cotton goods last year was 8,974,865,000 yards, down 564,447,000 yards from 1957, while production of rayon-acetate goods at 1,636,159,000 yards was up 182,122,000 yards from the 1957 total. Output of other man-made fibers (nylon, acrylic, polyester, saran, polyethylene and textile glass fabrics) came

to 681,182,000 yards in 1958, second only to the record of 776,013,000 yards set in the preceding year. Wool goods dropped to a new record low of 273,290,000 yards, and silks and miscellaneous goods were off slightly at 41,513,000 yards.

The textile industry in 1958 ranked 20th among 22 major U. S. manufacturing industries in the rate of profit (after taxes) earned on net sales. Textiles had ranked 21st in 1957 and 19th in 1956. In net sales, the textile industry ranked 10th in 1958; in both 1956 and 1957 the industry was 9th. Textile sales declined from \$13,191 million in 1956 to \$13,056 million in 1957 and to \$12,547 million in 1958, according to statistics released by the American Cotton Manufacturers Institute, Inc.

Nesty of Allied

(Continued from Page 35)

dent for research and development now span the whole spectrum of Allied Chemical's eight divisions and 12 research labs, he still keeps an eye on the nylon operation.

"Allied Chemical," he says, "is in fiber production to stay." And this statement finds reinforcement in the point quietly made by Allied's president Glen Miller in the company's 1958 annual report that its nylon operation has reached the profitable stage.

Now that it is wholeheartedly in the fiber business, equipped with a substantial fiber sales and service force, Allied is not overlooking the possibility that if nylon is profitable, additional and different fibers

may also be equally or even more profitable. The company has done much work on an acrylic fiber although for the present the project has been pushed to the back of the stove. Out in front, where the coals of research activity glow hotter, is work on other synthetic fibers.

But these are only a few of Allied Chemical's research projects looking toward new and profitable chemical products. Glenn Nesty's election to the board of directors gives resounding emphasis to Allied Chemical's enlarging interest in new products. Although Allied is modestly proud of the fact that currently 25% of its dollar volume is in products that have been added to its line since the end of World War II, the company is keen on bettering this record. And it is looking to Glenn Nesty to guide much of the work on new products. ■

PAPERS OF THE AMERICAN ASSOCIATION FOR TEXTILE TECHNOLOGY INC.[®]



AATT

Fiber Translation in Blends

By M. J. Coplan

FABRIC RESEARCH LABORATORIES, INC.

VERY PROBABLY, the earliest attempts to employ fiber mixtures in textile items were motivated by the desire to dilute an expensive fiber with a cheaper one. In recent times, however, competition to satisfy existing consumer demands and to create new ones has prompted a keener interest in the improvement of end-product quality through the intelligent use of fiber mixtures.

It may be unfortunately true that in some instances there has been a greater interest in exploiting the merchandising propaganda value of a glamorous fiber name. Happily, there are now as many glamorous new fibers as there are Rockettes. Hence, with almost everyone trying to dance in the front row, the use of different fibers in blends must and has come to be based on a real desire to achieve new intrinsic advantages.

As with many other areas of textile technology, the practice of blending fibers persists in being a mixture of art and science. This is not in itself necessarily a serious discredit to the textile industry.

There are two basic concepts which deserve some attention. The first is relatively well known by now, even to the consuming public, and may be called the concept of compromise. Since no one fiber possesses the maximum level of all virtues and the minimum of all deficiencies, it is obvious—and has been accepted—that adding even the “best” fiber to another, less well-endowed one, will not improve all the properties of the textile end item. Generally speaking, improvements of one sort or another in product performance are accompanied by detrimental effects in some others. Rather than belaboring this point with specific instances it may be illustrated by a generalized example.

Let there be 5 principal performance characteristics required of an end-item. Assume two individual fiber types may be manufactured into similar fabric for that end-item. Now, measure in these two 100%

fabrics each of the five performance properties by some appropriate test. Upon comparison (Table I) it will no doubt be found that one of these fiber types

TABLE I
Hypothetical Case of Predicting Blend Performance

Performance Property	Known Values* Fiber A	Fiber B	Predicted Values** 50-50 A-B
1	12	4	8
2	9	12	10.5
3	15	2	8.5
4	7	9	8
5	12	8	10

* Some arbitrary units reflecting the relative degree of excellence.

** Simple weighted average of the values for A and B separately.

Mr. Coplan is assistant director of Fabric Research Laboratories, Dedham, Mass. A graduate of Brooklyn College with an A.B. in chemistry, he has been with Fabric Research Laboratories since 1951. His earlier experience includes teaching on the staff of the Institute for Textile Technology; plant manager for the Montrose Chemical Co., in Newark, N. J., and service with the War Department. He has published a number of papers on subjects within the area of textile technology.



Myron J. Coplan

Presented at the May 6th, 1959 meeting of the American Association for Textile Technology at New York, N.Y.

yields a predominantly better fabric, with a few advantages remaining in favor of the other.

Now, we reason, a blend of these two fibers will yield a fabric with intermediate values of all 5 of the performance criteria. The result is expected to be a happy compromise. It is desirable that, in this compromise, none of the 5 performance characteristics will fall below some critical minimum level. For example, if 8 units is a minimum standard level for performance property number 1, it may be assumed that 50% fiber A will yield the necessary value.

The attempt to predict the optimum blend composition, however, may be fraught with frustration. And here is where the second and less well-recognized concept becomes important. For want of simpler terminology, let it be described as the concept of non-colligativeness. That is to say, it frequently happens that the properties of two fibers comprising a blend do not add together in proportion to the respective percentages in the mixture. For example, experience may demonstrate that as much as 65% of fiber A may be required in our hypothetical mixture to achieve the minimum level of 8 for performance property number 1.

When this occurs, one's preconceived idea of the ideal or optimum blend composition will not prove out. Confidence in the concept of compromise may be shaken, but is need not be so if there is some understanding of what contributes to the disproportionate effects that may have been observed. Here is where some science can pay off. At least some of the frustration may be relieved, if reasonable explanations can be given for the anomalous behavior.

The explanations for non-colligativeness generally fall into three categories, with a certain element of overlap, of course. These will each be illustrated by one or two specific examples, but before presenting the examples, the general problem ought perhaps be illustrated by a simple diagram. Figure 1 represents a hypothetical plot of some particular performance property, call it " P_1 ," versus % Blend composition. On the diagram a horizontal line, marked P_{min} , is drawn at a level corresponding to the minimum value

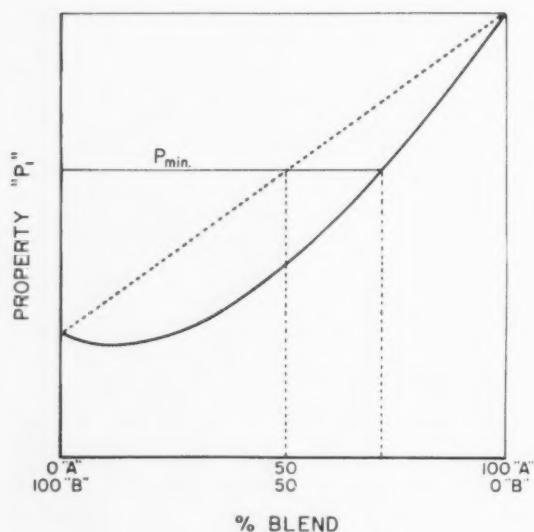


Figure 1

of property " P_1 " required in the end product. The dotted line represents a linearly proportional relationship of " P_1 " and blend composition that one might have calculated knowing the two end points for the two self fabrics, 100% A and 100% B. The solid, curved, line may be the actual relationship found by experiment covering a range of prepared blends.

The real relationship of blend composition and the measured property may, of course, be pretty nearly linear, or it may be concave in the opposite direction from that of Figure 1 or indeed may be rather peculiar in shape. Some of these will be shown later. The important point, here, is that to achieve the desired level, P_{min} , the amount of fiber required is different from the average predicted by simple arithmetic as illustrated in the diagram.

It was mentioned earlier that this non-colligative behavior might arise out of three possible causes. These are (a) under certain conditions, properties of two different fibers may be incompatible and are therefore not strictly additive; (b) inter-active effects may occur between the two fibers so that in the blend the respective behavior of one is modified by the presence of the other; and (c) since no blend is perfectly uniform (there being at best a random mixing, and under certain conditions marked segregation of the two components), the resultant product will in local regions exhibit the properties of blend compositions differing from the nominal average. Here are some examples:

Incompatibility of Properties

It has been found in many blends that yarn strength does not follow a linear relationship with blend proportion. The pattern illustrated by Figure 1, in fact, is frequently the case. That is to say, adding minor amounts of a stronger fiber to a weaker one sometimes (paradoxically it might seem), at first depresses the strength. Increasing amounts of the stronger fiber sooner or later reverses the trend, and as the blend shifts more toward the stronger component, strength rises toward the level of the stronger fiber.

The cause of this is rather simple and in fact is as commonplace as the change in your pocket. If you look at the back of a liberty head dime you will see the classical symbol of strength and authority, the "fasces"—a bundle of rods and an axe.

The bundle of rods is the important element here, and represents the tangible counterpart of the expression "united we stand, singly we fall."

In the case of yarn under tensile stress, the ability of fibers to contribute their intrinsic strength depends on a number of things, among the most important being the ability to stretch together. If the stronger of the fiber types in a blend has a markedly different extensibility from the weaker, the two fibers do not add the full components of their respective strengths at the time when the less extensible one fails. The blend yarn will be weakened thereby.

This problem is pretty well understood, and today there is sufficient recognition of it to warrant special efforts to eliminate it. For example, there has not been made available a type of nylon (duPont 420) whose stress-strain properties are reported to have been controlled to make it more compatible with those of cotton.

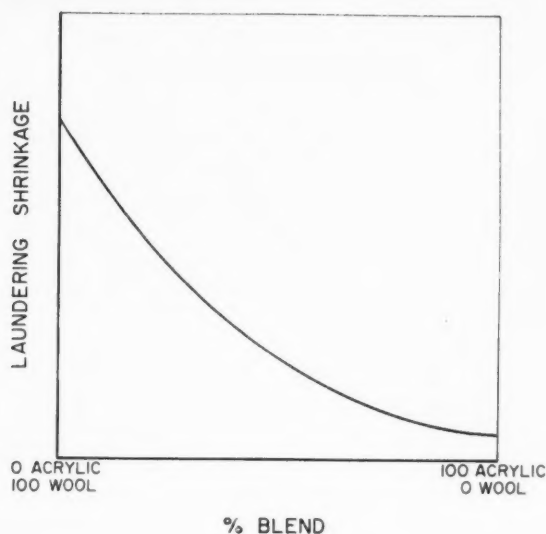


Figure 2

Inter-Active Effects

The laundering shrinkage of a series of wool-acrylic fiber blends is illustrated by Figure 2. It will be seen that the relationship is by no means linear. In effect, relatively small amounts of added acrylic fiber seem to produce disproportionately large reductions in the amount of shrinkage. This has been attributed to the ability of the man-made fiber to inhibit felting. This may or may not be the entire explanation, but the effect is real enough.

Another example of the inter-active effect is illustrated by Figure 3. Here the flexural stiffness of yarns is plotted for a range of wool-nylon blends. It will be observed that the 100% yarns do not differ much from one another, but that a small amount of added nylon yields a rather marked rise in yarn stiffness. Microscopic examination offers some explanation for this.

If the packing density of the fibers is measured, it is noted that a 100% wool yarn has more "free void"

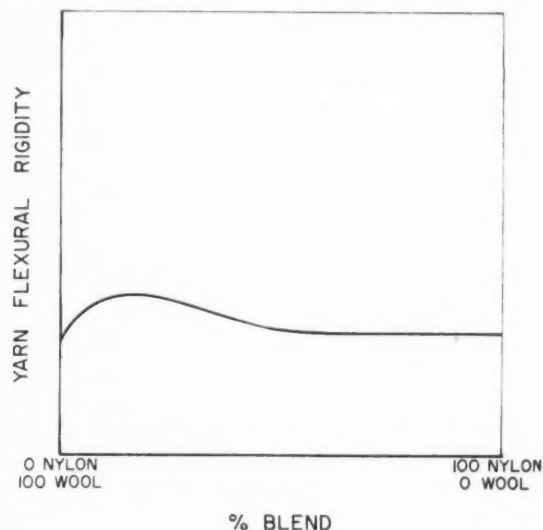


Figure 3

in the yarn center than the blends with nylon. Table II gives some typical results for the actual number of fibers of each sort found within the "core" of a series of yarn cross-sections.

TABLE II
Fiber Packing in the Core of the Yarn

Blend	No. of Wool Fibers	No. of Nylons	Total
100% Wool	40	0	40
87.5% Wool	38	7	45
50% Wool	22	23	45
100% Nylon	0	46	46

(Note—Average fiber diameters of wool and nylon are equal).

Evidently there is space available in the core of an all-wool yarn which is not accessible to other wool fibers at a given level of yarn twist, but which can be filled by nylon fibers as soon as these appear in the blend. As a result, small additions of the blend fiber tend to produce an immediate densification of the yarn and perhaps thereby contribute to an immediate rise in yarn rigidity out of proportion to what might have been expected.

Effects of Blend Distribution

This is a whole area for expansive discourse. In principle, however, the situation is simply that even in the best possible circumstances of blend mixing, there must be variation in blend composition from one place to another in the yarn. The familiar concepts of the statistical variation of yarn weight in spun yarns has its somewhat more complicated counterpart in the variation of blend.

The variation occurs both from spot to spot along the length of the yarn and from inside to outside within yarn cross-sections. Each of these variations has its peculiar effects. Variation along the yarn will give rise to various forms of color irregularity where there is any question of cross-dyeing. It will also create undue concentrations of either the weaker fiber or the more pillable fibers, or something of that sort. In a general sense, this effect is comparable to having a variable range of the property, P , because there is actually a variable range of blend composition along each yarn. Where there turns out to be an excessive concentration of one of the fibers occurring by statistical chance, at particular places in the fabric woven of these yarns, certain undesirable effects may occur.

Variation of blend from inside to outside of the yarn is now much better understood. It has, in fact, been put to advantage. In general, it has been demonstrated that longer, finer fibers tend toward the yarn core, with coarser and shorter fiber migrating to the periphery during original spinning. There is still some debate as to the effect of fiber extensibility on its migration tendency. However, it seems now possible to be able to control, within limits, the relative position of the fibers by proper choice of staple and denier if one knows which of the fibers he prefers to have in disproportionate concentration either at the yarn core or yarn periphery.

One desirable use of this information would be in promoting to the surface of a blended yarn a higher concentration of the more abrasion resistant fiber. In this case one could hope to find a disproportionately high effect of adding small amounts of the more re-

sistant fiber such as illustrated by the dash curve in the hypothetical Figure 4. On the other hand, if the wrong choice of staple and denier is made one might have a disproportionately low effect as illustrated by the dotted curve, because the fiber in question tended to be spun toward the yarn core.

The point here is that the value along the abscissa does not truly represent the concentration of blend at the region of the yarn—its surface—whose properties contribute to the measured performance.

In conclusion, and by way of summary, it should be reiterated that the attempt to optimize fabric properties by blending is really a choice of compromises. Both art and science come into play and perhaps they will and should always operate in this area of textile technology.

The fact that some blends do not behave strictly in accordance with a predetermined calculation based on measurements of the properties of the respective fibers in the blend may be discouraging. But a proper appreciation of the three basic factors contributing to disproportionate behavior will lead to better understanding and eventually better prediction of optimum blends for particular purposes. While a complete picture is not as yet available, continued efforts are leading to the knowledge necessary for the more scientific approach.

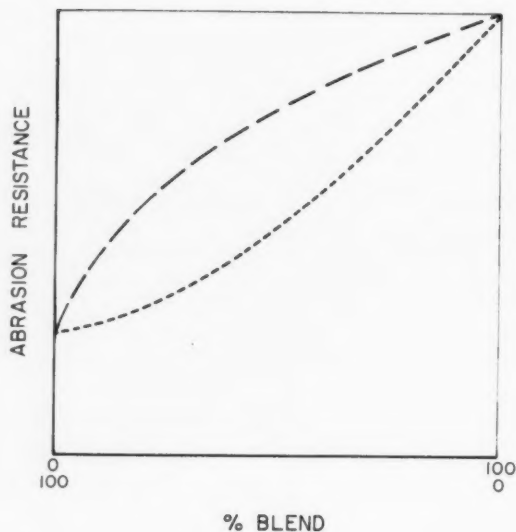


Figure 4

Discussion

At the conclusion of the speaker's prepared talk there was a discussion period during which he answered questions submitted by the audience. The following is a summary of some of the questions and the speaker's answers.

FRED W. NOECHEL (Allied Chemical Corp.): What effect would the specific gravity of a yarn have on its tendency to migrate within a blend?

COPLAN: There has been some notion that a fiber of higher specific gravity would more or less by a centrifugal diffusion affect the outside of the yarn, but there is no experimental evidence that makes this seem to be an important consideration.

RICHARD MYERS (Cone Mills): What is the minimum number of total fibers in the cross section before the migration becomes noticeable and causes a change in the property?

COPLAN: It depends upon the property you have in mind. If you think of color as a property, then one white fiber out of a hundred, when the others are black, will influence color. We can say, therefore, that color effect can be influenced by an absolute minimum of fibers. Certain other effects might not be apparent until a substantial amount of a given fiber is present.



Warsoff Sets Up Tag Firm

Creation of a new business to manufacture and print hang tags for garments, the Warsoff Tag Corp., was made known last month by Irving Warsoff, president of Reliable Sample Card Co., Inc. The new firm will occupy 20,000 square feet of floor space at 79 Seventh Ave., New York City. Warsoff is president of the new company, his son Richard is vice president and Mrs. Deborah Warsoff is secretary.

Warsoff Tag Corp. will have its own art department to help create and design tags of all sizes, shapes and colors, according to Warsoff. He stated that there is an ever-increasing demand for hang tags intensified by the wash-and-wear trend and the new fiber labeling law. "We feel," he said "that in forming the Warsoff Tag Corp. we are entering a phase of business that is bound to prosper. In a broader sense, it is our purpose to offer a service that is much needed under existing conditions and will prove valuable to the textile-apparel industry, the wholesale and retail trade and the consuming public."

TOAST TO THE FUTURE—Richard Warsoff (left) vice president of the Warsoff Tag Corp., and his father Irving Warsoff, president, drink to the success of their new venture.

For the DYER

and FINISHER

Soaping Procedures

If the high wetfastness ratings characteristic of goods dyed or printed with fiber-reactive dyes are to be achieved, a thorough soaping procedure is essential to remove unfixed colored by-products formed by secondary reactions of dye with water, according to Arnold, Hoffman & Co., manufacturers of Procion fiber-reactive dyestuffs. The company recommends its scouring agent, Synthrapol SP, a blend of surface active agents. *For samples and further information write the editors.*

New Finishing Agent

Solutol-S, designed specifically for resin finishing of cottons and synthetics, is now offered by Solutol Chemical Co. The new finishing agent is said to be particularly effective in connection with thermosetting resins for crease resistant fabrics, resulting in improved tear strength, tensile strength and crease angle values as well as good sewability and abrasion resistance. It is non-yellowing and non-chlorine retentive.

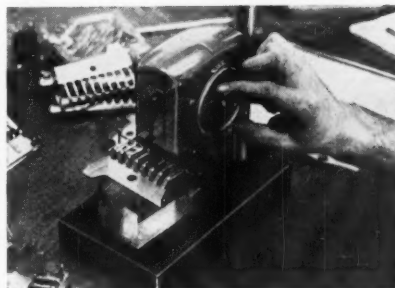
The company also offers Anti-foam-Ga, a silicone bearing defoaming agent for use in low concentrations for foam control in finishing, printing and dye baths at high and low temperatures. *For further information write the editors.*

Surfactant Distributor

Antara Chemicals, sales division of General Aniline & Film Corp., has appointed Amso Solvents & Chemicals Co. as distributors for Igepal CO and CA surfactants. Amso will provide truck delivery of drum and bulk quantities in the Cincinnati, Dayton, Columbus, Springfield and Southern Ohio areas. Bulk storage for Igepal CO-630 and Igepal CA-630 will be established at Cincinnati in the near future. Service facilities are available to accommodate customers who desire the blending of two or more surfactants. *For further information write the editors.*

Surface Agent Catalog

Onyx Oil & Chemical Co. has published a new 24-page catalog on surface active agents. Each product is described by trade name, active ingredient, percent activity, physical state, general use, specific applications and properties. The products are divided into three general classes: anionic, cationic and non-ionic. *For free copies write the editors.*



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NEW FABRICS

Ban-Lon Tricot Fabric

Joseph Bancroft & Sons Co. has announced the development and availability of "Ban-Lon" tricot fabric and garments. The company, pointing to Ban-Lon tricot fabric properties such as opacity, weight, absorption and hand, said its major advantage is that it is knit of permanently crimped "Texturalized" yarn. Present end-uses include women's underwear and blouses. Dresses, lingerie and sleepwear lines are being styled for fall. *For further information write the editors.*

Plush Knit Orlon Fabric

A new knit fabric of Du Pont Orlon acrylic fiber is available in spring sweaters. The napped and sheared interlock fabric remains unchanged even after repeated launderings, with garments staying true to shape and size. Its pliant quality is said to present wide possibilities in designing sweaters. "Wundana" sweaters, napped and sheared interlock fabric of 100% Orlon, are now being produced by Shelley Knitting Mills. *For further information write the editors.*

TDI News

TDI Musical Show Big Hit

"One of the best TDI shows ever produced," was the virtually unanimous verdict of some 250 members and guests who laughed heartily at the annual musical lampoon of the Textile Distributors Institute staged as the high point in the festivities attending the group's golf tournament and outing at Shawnee Inn, Shawnee-on-Delaware, Pa., last month.

Producer and director of the show was Bud Schlesinger, Chemstrand Corp. Writers who helped write the songs and script included Standish Holmes, American Enka Corp., William Radebaugh, the Du Pont Co., and Edgar Schlesinger, United International Corp.

In the golf tournament, C. L. Stafford, Jr., Burlington Industries, won in the low gross class for members with a score of 79. In the competition for guests, Samuel B. Lippincott, consultant, was first with a low gross score of 76. Other winners among members were Ira Jacobson, Cohn-Hall-Marx, first low net with 69; Merwin R. Haskel, Cohn-Hall-Marx, second low gross with 83; Douglas Kaften, Cohn-Hall-Marx, second low net with 85.

Among guests, other winners included M. B. Carr, American Enka Corp., first low net with 69; Richard Powers, Celanese Corp. of America, second low gross with 77; Charles W. Carvin, Jr., Chemstrand Corp., second low net with 69; M. G. Gamble, the Du Pont Co., third low gross with 79; Lon Nave, Beaunit Mills, third low net with 69.

New TDI Member

Sage Fabrics Corp., 1369 Broadway, New York 18, N. Y., has been elected to membership in the Textile Distributors Institute, according to a recent announcement by Hilda A. Wiedenfeld, executive director. The firm, which is a distributor of women's and girls' woven fabrics, will be represented in TDI matters by Matthew Schwarz, president, Richard Schwarz, treasurer, and Stewart Schwarz, vice president.

THE TEXTILE



DISTRIBUTORS INSTITUTE, INC.

NEWS AND COMMENT

Shawnee Shenanigans

GREEN CHEESE AND TAFFETIAS
OR
ALONZO IN BLUNDERLAND



GRAND FINALE—Producer Bud Schlesinger and the cast on stage for the last scene of a side-splitting lampoon on the current follies of the textile industry.



WHAT GOES ON HERE?—Four typically loony scenes from the TDI's "luna-tic" moonstruck, moonlit farce.

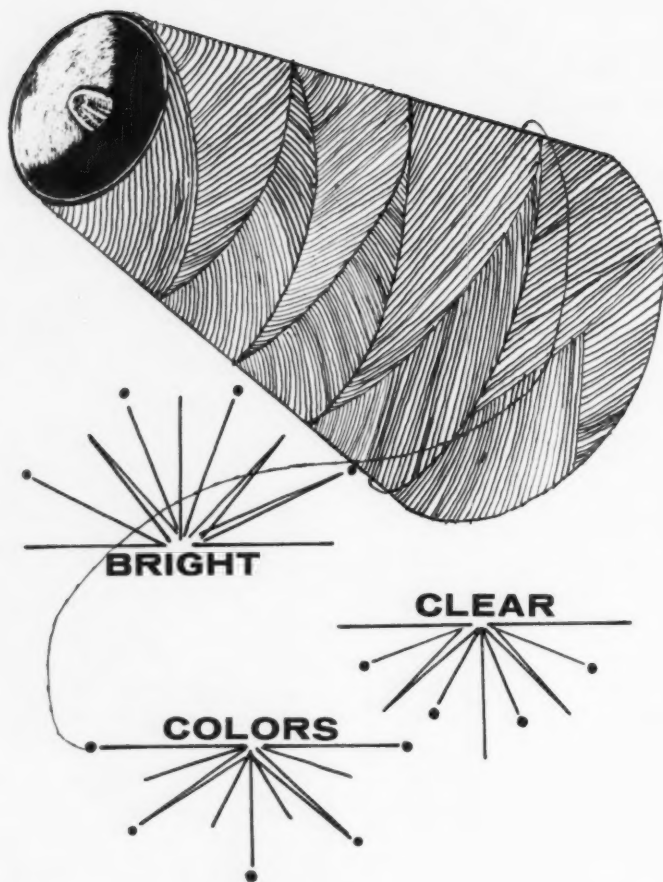
some souvenir views



MUSICAL MOONMAN—Lon Nave, star of the show, singing a ditty.



SMILING WINNER—Champion golfer, C. L. Stafford accepts a cup from TDI official Sam Schwartz.



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TEXTILE

NEWS BRIEFS

Creslan's Promotional Effort

The advertising campaign to build trade and consumer recognition for American Cynamid Co.'s new Creslan acrylic fiber will be the largest ever put behind a fiber in its introductory year, according to Charles W. Rice, Jr., advertising manager for Creslan. The recognition campaign to the trade began last August, and will enter its consumer phase this September.

'No-Iron' Sheets Popular

Consumers are willing to pay a premium to get no-iron bedsheets, according to Peter G. Scotese, vice president sales and advertising, Indian Head Mills, Inc. At a recent Sheet Forum, he said that dollar volume of sales since last May proves this. He pointed out that even with a money back guarantee, consumer returns have been negligible.

Fashions at Moscow Show

The Fashion industries presentation in The American National Exhibition in Moscow this summer will illustrate, geographically and socio-economically, how fashion is an integral part of American life. The exhibition at Moscow will run for six weeks, from July 25 to September 4, and will be the largest "live" presentation in the actual number of participants, according to The Fashion Bureau.

Caron Expands in Holland

Caron Spinning Co. has formed Carolac N.V., a Netherlands corporation, for processing Orlon and other synthetic fibers for the common market and free trade countries of Europe. The manufacturing plant will be in Dordrecht, Holland, on a site adjoining the Du Pont Orlon plant. Construction is scheduled by the end of this year. Sales offices will be opened in Geneva, Switzerland, and sales agencies formed in Germany, Italy, France, Belgium, Norway, Denmark and Sweden. For further information write the editors.

Chemstrand Quality Seal

Chemstrand Corp. will expand use of its Seal of Quality Program for blankets made of 100% Acrilan acrylic fiber. Under the new program, the company's quality standards testing procedures will now apply individually to each of the three-blanket-type ranges known as Winterweight, Medium Weight and Lightweight.

(Continued on Page 49)

U. S. MAN-MADE FIBER PRICES

This schedule lists the prices of yarns, staple and tow as reported by the producers in June 1959. All prices are given as subject to change without notice.

CELLULOSIC YARNS ACETATE

American Viscose Corp.

Current Prices

Effective March 13, 1959

Bright and Dull * Intermediate Twist

Denier & Filaments	Cones & 4-6 Lb. Tubes	Twister Tubes	Warps	Spinning Cones	Twist Warps
40/11					\$1.14
45/11					1.03
55/14	\$.99	\$.97	\$1.00		.87
75/20	.95	.93	.96	\$.89	.90
100/28	.91	.89	.92	.85	.86
120/32	.82	.80	.83	.76	.77
150/41	.74	.73	.75	.69	.70
200/54	.70	.69	.71	.66	.67
300/80	.66	.65	.67	.62	.63

* Standard Twist 2 $\frac{1}{2}$ Additional.

Terms: Net 30 Days.

Celanese Corp. of America

Current Prices

Effective March 10, 1959

Bright & Dull

Denier and Filaments	Intermediate Twist		Spinning Twist			
	4 & 6-Lb. Cones	Beams	4-Pound Cheeses	Cones	Beams	0 Twist Tubes
45/13	\$1.12	\$1.13	\$.95	\$.89	\$.90	\$.79
75/20	.95	.96	.98	.92	.94	.84
100/28-40	.91	.92	.95	.85	.86	.77
120/40	.82	.83	.86	.76	.77	.66
150/40	.74	.75	.74	.69	.70	.60
200/52	.70	.71	.66	.62	.63	.56
300/80	.66	.67	.62	.58	.59	.51
450/120	.66	.67	.62	.58	.59	.51
600/160	.65	.66	.61	.57	.58	.50
900/80-240	.63	.64	.59	.55	.56	.48

150 Denier 12-TM Tubes73
2-Pound Cheeses01 Less Than 4-Pound Cheeses

2-BU and 4-BU Tubes Same Price as 4 and 6-Lb. Cones

Terms: Net 30 days. Shipments prepaid to any destination in U.S.A.

Prices on unlisted items can be obtained upon request.

Orders are subject to conditions of sale appearing on our acknowledgements of orders.

Celaperm Filament Yarn Prices

Denier and Filaments	Intermediate Twist		Spinning Twist	
	4 & 6-Lb. Cones	Beams	Cones	Beams
55/15	\$1.37	\$1.38	\$1.31	\$1.32
75/20	1.34	1.35	1.28	1.29
100/26	1.28	1.29	1.22	1.23
120/40	1.19	1.20	1.13	1.14
150/40	1.11	1.12	1.06	1.07
200/52	1.05	1.06	1.01	1.02
300/80	1.01	1.02	.97	.98
450/120	.99	1.00	.95	.96
600/160	.97	.98	.....	.....
900/80	.94	.....	.....	.....

Celaperm Black Yarn Prices

Effective March 11, 1955

Denier and Filaments	Intermediate Twist		Spinning Twist	
	4 & 6-Lb. Cones	Beams	Cones	Beams
55/15	\$1.17	\$1.18	\$1.11	\$1.12
75/20	1.14	1.15	1.08	1.09
100/26	1.08	1.09	1.02	1.03
120/40	.99	1.00	.93	.94
150/40	.91	.92	.86	.87
200/52	.85	.86	.81	.82
300/80	.81	.82	.77	.78
450/120	.79	.80	.75	.76
600/160	.77	.78	.....	.....
900/80	.74	.....	.....	.....

3 to 5 Turns on Cones or Beams — \$.02 Additional

Terms: Net 30 days. Transportation prepaid or allowed to any destination in U.S.A.

Prices subject to change without notice.

All previous prices withdrawn.

Note: Prices on unlisted items can be obtained upon request.

Orders are subject to conditions of sale appearing on our Acknowledgments of Orders.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

Acetate

Denier & Filament	Zero Twist		Low Twist		Intermediate Twist			
	Tubes	Beams	Cones	Beams	2 & 4 Lb. % Tubes	4 & 6 Lb. Tw. Tubes	Cones	Beams
45-13	\$1.03	\$1.11		\$1.12				
55-18	.925	.985		.99			\$1.04	\$1.05
55-24	.925	.985		.99			1.04	1.05
75-24	.84	.94		.95		\$.98	1.00	1.01
75-50		.97		.97		1.00	1.02	1.03
100-32	.81	.89		.90		.93	.95	.96
120-50	.77	.80		.81		.85	.86	.87
150-40	.69	.72	.72	.73	.77	.77	.77	.78
200-60	.68		.69	.70	.73	.73	.73	.74
240-80			.67				.71	
300-80	.63	.65	.65	.66	.69	.69	.69	.70
400-120	.63		.63	.64	.67	.67	.67	.68
600-160					.65		.65	.66
900-44					.63		.63	.64
900-240					.63		.63	.64
1800-88					.61		.61	.62
2700-132					.61		.61	.62
3000-210					.61		.61	.62

(A) Regular Twist (2.9 and 5 T.P.I.)—add \$.02 to Intermediate Twist Price.

(B) 1 lb. % Tubes—add \$.02 to 2 & 4 lb. % Tube Price.

Color-Sealed

Denier & Filament	Zero Twist		Low Twist		Intermediate Twist			
	Tubes	Beams	Cones	Beams	2 Lb. Tubes	4 & 6 Lb. Tubes	Cones	Beams
55-18	\$1.245	\$1.315		\$1.32	\$1.35	\$1.35	\$1.37	\$1.38
75-24	1.18	1.28		1.29	1.32	1.32	1.34	1.35
100-32	1.14			1.23	1.26	1.26	1.28	1.29
150-40	1.03	1.06	1.06	1.07	1.10	1.11	1.11	1.12
200-60			1.01	1.02	1.04	1.05	1.05	1.06
300-80	.95	.97	.97	.98	1.00	1.01	1.01	1.02

(A) Regular Twist—Add \$.02 to Intermediate Twist Price.

Black

Denier & Filament	Zero Twist		Low Twist		Intermediate Twist			
	Tubes	Beams	Cones	Beams	2 & 4 Lb. % Tubes	4 & 6 Lb. Tw. Tubes	Cones	Beams
55-18	\$1.045	\$1.115		\$1.12	\$1.15	\$1.17	\$1.18	
75-24	.98	1.08		1.09	1.12	1.14	1.15	
100-32	.94			1.03	1.06	1.08	1.09	
150-40	.83	.86	.86	.87	.91	.91	.92	
200-60	.80		.81	.82	.85	.85	.86	
300-80	.75	.77	.77	.78	.81	.81	.82	
450-120			.75	.76	.79	.79	.80	
600-160			.73	.74	.77	.77	.78	
900-240			.73	.74	.74	.74	.75	

(A) Regular Twist (2.9 and 5 T.P.I.)—add \$.02 to Int. Twist Price.

(B) 1 lb. % Tubes—add \$.02 to 2 & 4 lb. % Tube Price.

Specialty Yarns

Type 20

Same Price as Regular Yarn

Type C

Same Price as Regular Yarn

Thick & Thin

Denier & Filament	Natural		Black		Color-Sealed	
	Cones	Beams	Cones	Beams	Cones	Beams
200-64 Int. Twist	1.05		\$1.15		\$1.35	
200-64 Reg. Twist	1.08	\$1.09	1.17	\$1.21		

Terms: Net 30 days. Subject to changes without notice.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route within the continental limits of the United States, excluding Alaska.

Eastman Chemical Products, Inc.

Tennessee Eastman Co.

Effective March 13, 1959

"Estron" Yarn, Bright or Dull — White

Denier & Filament	Regular Twist		Intermediate Twist		Low Twist		Zero Twist		Tricot Beams	
	Cones	Beams	Cones	Beams	Cones	Beams	Tubes	Beams	Zero Twist	Zero Twist
55/13	\$1.01	\$1.02	\$0.99	\$1.00	\$0.93	\$0.94	\$0.82	\$0.87	\$0.86	
75/19	.97	.98	.95	.96	.89	.90			.90	
75/49	.99	1.00	.97	.98						
100/25	.93	.94	.91	.92	.85	.86				
120/30	.84	.85	.82	.83	.76	.77				
150/38	.76	.77	.74	.75	.69	.70	.66			
200/50	.72	.73	.70	.71	.66	.67				
300/75	.68	.69	.66	.67	.62	.63	.60			
450/114	.68	.69	.66	.67	.62	.63				
600/156	.67	.68	.65	.66	.62	.63				
900/230	.65	.66	.63	.64			.61			
Heavier							.56			

Current Prices—December 19, 1955

"Chromspun"—Standard Colors (Except Black)

Denier & Filament	Regular Twist Cones	Beams	Intermediate Twist Cones	Beams	Low Twist Cones	Beams
55/13	\$1.39	\$1.40	\$1.37	\$1.38	\$1.31	\$1.32
75/19	1.36	1.37	1.34	1.35	1.28	1.29
100/25	1.30	1.31	1.28	1.29	1.22	1.23
150/38	.....	.....	1.11	1.12	1.06	1.07
300/75	.....	.....	1.01	1.02	.97	.98
450/114	.....	.....	.99	1.00	.95	.96
900/230	.....	.....	.94	.95	.....	.....

Current Prices

"Chromspun"—Black

Denier & Filament	Regular Twist Cones	Beams	Intermediate Twist Cones	Beams	Low Twist & Spun Twist Cones	Beams
55/13	\$1.19	\$1.17	\$1.18	\$1.12	.....	.....
75/19	1.16	1.14	1.15	1.09	.....	.....
100/25	1.10	1.08	1.09	1.03	.....	.....
150/38	.93	.91	.92	.87	.....	.....
200/50	.87	.85	.86	.82	.....	.....
300/75	.83	.81	.82	.78	.....	.....
450/114	.81	.79	.80	.76	.....	.....
900/230	.76	.74	.75	.....	.....	.....

Prices are subject to change without notice.

Prices on special items quoted on request.

Terms: Net 30 days. Payment—U. S. A. dollars.

Transportation charges prepaid or allowed to destination in continental United States except Alaska. Seller reserves right to select route and method of shipment. If Buyer requests and Seller agrees to a route or method involving higher than lowest rate Buyer shall pay the excess of transportation cost and tax.

* "Estron" is a trade-mark of the Eastman Kodak Company.

RAYON

American Bemberg

Current Prices

Regular Production Reel Spun Yarn

Den./Fil.	No Turn Skeins	Turned* Skeins & Cones	5 1/2 Turns	High Turn Skeins & Cones 12 Turns	15 Turns	18 Turns
40/30	\$1.49	\$1.95	.....	.....	.....	\$2.08
50/36	1.29	1.35	.....	.....	.....	1.85
65/45	1.19	1.35	.....	\$1.58	.....	1.83
76/60*	1.08	1.22	.....	1.45	\$1.50	1.53
100/74**	.99	1.12	.....	1.37	1.42	1.48
125/90	.98	1.09	\$1.13	1.34	.....	.....
150/120	.96	1.05	1.15	1.30	.....	.....
300/225	.....	.98	.....	.....	1.11	.....
900/372	.....	.88	.....	.....	.....	.....
1800/744	.....	.88	.....	.....	.....	.....

* Turn includes twists up to 6 turns on 40 and 50 denier, and up to 5 turns on heavier deniers.

** Spun Dyed Cupracolor Black 15¢ per lb. extra.

"44" HH Spool Spun Yarn

Den./Fil.	No Turn Tubes	No Turn Beams	5 Turn Beams	5 Turn Cones	12 Turn Beams	12 Turn Cones	15 Turn Cones
40/30	\$1.35	\$1.35	.....	.....	.....	.....	.....
50/36	1.05	1.05	.....	.....	.....	.....	.....
65/45	1.10	.....	.....	.....	.....	\$1.47	.....
75/45*	1.01	.....	\$1.12	\$1.12	\$1.35	1.35	\$1.43
100/60*	.93	.....	1.07	1.07	1.27	1.27	1.35
125/90	.88	.....	1.03	1.03	.....	.....	.....
150/90*	.80	.....	.84	.84	1.18	1.18	1.27
150/120	.84	.....	.....	.96	.....	.....	.....

* Available also in Spun Dyed Cupracolor Black at 15¢ per lb. extra.

"44" HH "Parfe" Spool Spun Yarn

Den./Fil.	No Turn Cones	5 Turn Cones	5 Turn Beams	12 Turn Cones	15 Turn Cones
50/36	\$1.60	\$1.85	\$1.85	.....	.....
75/45	1.45	1.55	1.55	\$1.75	\$1.85
100/60	1.35	1.45	1.45	1.65	1.75
150/90	1.18	1.25	1.25	1.60	1.70
300/120	1.18	1.25	.....	.....	.....

Nub-Lite (Short Nubbi)

Code	Den./Fil.	2 1/2 Turn Natural Cones	2 1/2 Turn Natural Cones*	5 Turn Natural Cones	5 Turn Natural Cones*
1515	160/90	.....	.....	\$1.50	\$1.40
1519**	155/90	.....	.....	1.50	1.40
2008	200/120	.....	.....	1.11	1.01
3002	315/180	\$1.15	\$1.05	.....	.....
4011	410/224	1.15	1.05	.....	.....
6001	600/360	1.13	1.03	.....	.....
8001	860/450	1.13	1.03	.....	.....

* Basic price for cones when dyed. Dyed Colors 30 and 35 cents above basic price. Prices based on 200 lb. dyed lots only. Prices for natural yarn skeins same as natural cone prices.

** Code 1515 can be run in warp or filling.

CUPIONI Type B

Code	Den./Fil.	2 1/2 Turn Cones
9650	70/45	\$1.69
9660	100/60	1.53
1545	150/90	1.30
9730	285/135	1.15
9792	450/225	1.15
9814	600/372	1.12
9837	940/372	1.02

"Spun Dyed Cupracolor is spun 150, 285, and 940 deniers at 35¢ per pound extra. Cupracolor Black Comes in all deniers."

STRATA SLUB

Code	Den./Fil.	Turned Cones	Price
9747	275/225	3 1/2	\$1.25
9798	450/372	2 1/2	1.15
9823	600/372	2 1/2	1.10
9847	960/372	2 1/2	1.02
9885	1290/372	1 1/2	1.00
9934	2680/744	1 1/2	1.00

"Spun Dyed Cupracolor is spun in 600 and 960 deniers at 35¢ per pound extra."

FLAIKONA

Code	Den./Fil.	Turned Cones	Price
9669	150/148	2 1/2	\$1.35
9769	300/224	2 1/2	1.25
9782	450/270	2 1/2	1.05
9807	600/405	2 1/2	1.05
9840	900/450	2 1/2	1.00
9924	2000/744	2 1/2	.95

"Spun Dyed Cupracolor Black 35¢ per pound extra."

Terms: Net 30 days, F. O. B. shipping point. Minimum freight allowed to consignee's nearest freight station east of the Mississippi River. To points west of the Mississippi River minimum freight allowed to Memphis, Tennessee. Goods after shipment shall be at buyer's risk. Merchandise transported in seller's own trucks or those of its affiliates is sold F. O. B. delivery point.

American Enka Corp.

Current Prices

Effective March 9, 1959

Standard Quality Yarns

Standard Quality Rayon Yarns

Den./Fil.	Luster	Turns	NATURAL		Long	Short	Cakes	Cones	Tubes
			Weaving	Skeins					
50/18	E	5 S						1.59	
50/20	B	2.5 S					1.48		
75/10	B	3 S	S&Z				.98		
75/18	E	4 S						1.10	
75/30	B	2.5, 4S&Z		1.10	1.10	1.18	1.27	.98	
75/30	B	5 S		1.20		1.35	1.45		1.20
75/45	P.E	2.5							1.25
75/60	B,P	4, 5S&Z		1.10	1.10	1.18	1.27	.98	1.10
100/14	B	3 S	S&Z				1.00		
100/40	B,E	12 S				1.11	.86		
100/40	B,P,E	4.5 S	S&Z					.94	1.25
100/40	B	6 S		1.13		1.22	1.32	1.05	
100/40	B,P	2.5, 4S&Z		.94	.94	1.03	1.11	.96	
100/60	B	4 S&Z						.86	
100/60	E	2.5 S		.96	.96			.88	
125/40	E	3 Z						.83	.86
150/40	B,P,E	2.1, 3S&Z		.79	.79	.88	.95	.75	.79
150/40	B,E	5 S&Z		.87	.87	1.07	1.17	.83	
150/40	B,P,E	8 S&Z		.92	.92	1.12	1.22	.88	
150/90	E	2.1 S&Z		.80	.80			.76	.85
200/40	P	3 Z		.78	.78	.87	.94	.74	.78
200/40	B	5 S				1.03	.91		
250/60	P,E	2.4 Z				.86	.93		.77
300/30	E	3 S		.78	.82				
300/50	B,E	3 S		.70	.73				
300/60, 120	B,P,E	2.1 S&Z		.70	.70	.76	.83	.68	.70
300/60	B	3.5 S		.70	.70	.76	.83	.68	
300/60	B	7 S		.80	.80		.91		
300/40, 120H.T.	B	2.5							
		3, 4S		.72	.72			.70	
450/80	B,E	3 S		.66	.68	.73	.80	.64	
600/80	B,E	3 S		.70	.72				
600/120	B	3 S		.66	.68	.73	.80	.64	
900/120	B	3.4 S		.66	.68	.73	.80	.64	
900/120H.T.	B	3.6 S		.68	.68			.66	

B = Briglio
P = Periglio (Semi-Dull)

E = Englo (Dull)
H.T. = High Tenacity

B = Briglo

P = Periglo (Semi-Dull)

E = Englo (Dull)

H.T. = High Tenacity

Jetspun® (Colored Yarns)

Den./Fil.	Tenacity	Turns	Weaving Cones	Beams	Colors
100/40	Regular	2.5S	\$1.31	\$1.31	All
150/40	Regular	2.1S	1.14	1.14	All
200/40	Regular	8.3S	1.25	1.25	All
300/40	Regular	3.4S	1.06	1.06	All
300/120	Regular	2.1S	1.06	1.06	All
450/80	Regular	3.0S	1.02	1.02	All
600/80	Regular	3.4S	1.01	1.01	All
300/40	High	3.4S	1.08	1.08	All
600/80	High	3.4S	1.04	1.04	All
900/120	High	3.4S	1.03	1.03	All

® Registered Trade Mark for American Enka Solution-dyed Rayon Yarn.

Skyloft (Lofted Rayon Filament Yarns)

Natural and Jetspun®

Denier	Denier per Filament	Twist	Natural	Black	Other Colors
1000	7.5	3.5S	\$.82	\$1.17	\$1.17
2200	15	3.5S&Z	.67	.77	.84
2700	15	3.5S&Z	.67	.77	.84
4300	15	3.0S&Z	.66	.76	.83
5300	15	3.0S&Z	.65	.75	.82

American Viscose Corp.

Effective February 27, 1959

Graded Yarns

Denier	Filament	Type	Short Skeins	Long Skeins	Cones Tubes	Beams Spools	Cakes
50 20		Regular Turns	.....	.....	.....	.....	.....
60 10		Bright & Dull	\$	.....	\$1.62 \$1.59	\$1.59 \$1.48	.....
75 10-30		Bright	.....	1.27 1.18	1.10 1.10	1.10 .98	.....
75 30		Dull	.....	.....	1.10 1.10	1.08	.....
100 14-40		Bright	.....	1.11 1.03	.94 .94	.94 .88	.....
100 60		Dull	.....	.....	.96 .96	.96 .88	.....

Fortune Promoted at Beaunit

James C. Fortune has been appointed director in charge of merchandising, advertising and promotion of all textile fibers for Beaunit Mills, Inc., according to a recent announcement by Charles P. Bertland, vice president for marketing of the company's fibers division. Fortune was formerly sales manager of American Bemberg, a subsidiary of Beaunit.

Bertland also announced that Richard I. DeVine continues as sales manager for tires, industrial purposes and general textile uses. Alonzo T. Nave has been named director of yarn and fabric development for all fibers while Victor Bez, formerly senior sales representative in the metropolitan area, has become product manager for Bemberg fibers. James N. McDonald, formerly in sales service at Elizabethton,



A. T. Nave

J. C. Fortune

R. I. DeVine

Tenn., has been transferred to New York to serve as product manager for polyester and other noncellulosic fibers.

Meanwhile, it was revealed last month that Beaunit has selected the name "Vycron" for its new polyester fiber which is in pilot plant production at Elizabethton.

Honor Whitin Old-Timers

Old-time employees with 40 or more years of service were honored recently at a dinner tendered by Whitin Machine Works, The 282 Whitin employes honored had accumulated 13,074 years of service. E. Kent Swift, Whitin board chairman and who presided at the dinner, himself is the third oldest active employee, with 59 years of service. Exactly half of the 282 veterans honored are still active, the other half having retired.

New Hunter Machine Plant

The James Hunter Machine Co. has opened its new plant at Mauldin, S. C. The 35,000-square foot plant doubles the area available at the old location in Greenville, S. C. The new plant will specialize in the manufacture of automatic blending equipment for cotton, synthetic and wool fibers, as well as card and garnett feeds.



H. A. Koller

Forms Koller Chemical Co.

Howard A. Koller has established his own firm, Koller Chemical Co. in Hazelton, Pa., to manufacture and sell oils and chemicals primarily to the textile industry. Koller formerly was associated with a silk throwing plant, first as chief chemist and then as assistant manager. His firm will specialize in throwing oils (silk, rayon, and all other synthetic yarns) and sizes for the weavers of natural and man-made fibers as well as auxiliaries and finishes for the dyehouse.

NON-FLUID OIL

TRADE MARK REGISTERED

THE LEADING LOOM LUBRICANT

The majority of mills have adopted NON-FLUID OIL as the standard loom lubricant because its use enables them to secure maximum output of perfect goods.

Ordinary oils or greases drip, spatter and leak, getting on warps, woven goods and floors, resulting in higher "seconds," higher lubrication cost and highest application cost. NON-FLUID OIL prevents these losses by staying in bearings and lubricating instantly and positively until entirely consumed; its use assures peak production at lowest cost.

Send for Bulletin T-20 and a free sample of NON-FLUID OIL for a fair trial on your looms . . . You will quickly see why 7 out of 10 mills use NON-FLUID OIL regularly.

NEW YORK & NEW JERSEY LUBRICANT COMPANY

292 MADISON AVE., NEW YORK 17, N. Y.

WORKS: NEWARK, N. J.

Sou. Dist. Mgr.: Fred W. Phillips, Greenville, S. C.

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Atlanta, Ga.
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Springfield, Mass.
Chicago, Ill.

Detroit, Mich.
St. Louis, Mo.

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.

150 24-40	Bright	.95	.88	.79	.79	.75
150 40	Semi-Dull	.95	.88	.79	.79	.75
150 40	Dull	....	....	.79	.79	.75
150 90	Dull	....	....	.80	....	.76
200 10-44	Bright	.94	.87	.78	.78	.74
250 60	Semi-Dull & Dull	.93	.86	.77	.77	.74
300 15	Bright	....	.79	.75	.75	....
300 30	Dull Flat Filament	....	....	.82	....	....
300 44	Bright & Dull	.83	.76	.70	.70	.68
300 234	Dull	....	....	.80	....	.78
375 60	Bright	....	....	.69	.69	....
450 60-100	Bright	....	.73	.66	.66	.64
600 100	Bright & Dull	....	.73	.66	.66	.64
900 50-100-150	Bright	....	.73	.66	.66	.64
1200 75	Bright	....	.73	.66	.66	....
2700 150	Bright	....	.73	.66	.68	....

Extra Turns Per Inch

75 30	Bright 6-Turns	\$1.45	\$1.35	\$1.20	\$1.20	\$
100 40	Bright 6-Turns	1.32	1.22	1.13	1.13	1.05
150 40	Bright 6-Turns	1.17	1.07	.87	.87	.85
200 44	Bright 6-Turns	....	.98	.83	.93	....
300 15	Bright 5-Turns	....	....	.83	.83	....
300 44	Bright 4.3-Turns	....	....	.78	....	.76
300 44	Bright 6-Turns	.91	.84	.83	.83	.81
300 120	Rayflex 6-Turns	....	....	.90	.90	....
600 30	Rayflex 5-Turns	....	.81	.79	.79	.77

Rayflex Yarns

75 30	Rayflex	\$	\$	\$1.18	\$1.18	\$1.09
100 40	Rayflex	....	....	1.03	1.03	.95
150 40-60	Rayflex	....	....	.82	.82	.78
200 75	Rayflex	....	....	.81	.81	.77
300 60-120	Rayflex	....	....	.72	.72	.70
450 120	Rayflex	....	....	.68	.68	.66
600 234	Rayflex	....	....	.68	.68	.66
900 350	Rayflex	....	.75	.68	.68	.66

Thick & Thin Yarns

150 40-90	Bright & Dull	\$	\$	\$1.18	\$	\$
200 75	Bright & Dull	....	....	1.08	....	....
300 120	Bright & Dull	....	....	.98	....	....
450 100	Bright & Dull	....	....	.92	....	....
490 120	Bright & Dull	....	....	.96	....	....
900 350	Dull	....	....	1.03	....	....
120 120	Bright & Dull	....	....	1.03	....	....

Colorspun Yarns

Denier	Type	Cones/Tubes Beams/Spools
75	Regular Strength	\$1.63
100	Regular Strength	1.31
150	Regular Strength	1.14
200	Regular Strength	1.11
300	Regular Strength	1.06
450	Regular Strength	1.02
600	Regular Strength	1.02
900	Regular Strength	1.02
300	High Strength	1.08
450	High Strength	1.03
900	High Strength	1.03
300	Regular Strength 5-Turns	1.16

Avicron Yarns

Denier	Filament	Cones/Tubes Beams/Spools
1800	100-200 Singles & 2 Ply	\$.68
2700	150-300-980 Singles & 2 Ply	.65

Viscose Filament Yarns

The following material deposit charges are required:

Metal Section Beams	\$170.00 each
Metal Section Beam Racks	75.00 each
Metal Tricot Spools—14" flange	30.00 each
21" flange	60.00 each
32" flange	150.00 each
Metal Tricot Spool Racks—14" flange	135.00 each
21" flange	100.00 each
32" flange	75.00 each
Wooden Tricot Spool Crates	20.00 each
Cloth Cake Covers	.05 each

Same to be credited upon return in good condition—freight collect.

Celanese Corp. of America

Current Prices

Effective March 2, 1959

Viscose Rayon Filament Yarn Prices—Bright and Dull

Denier/Fil./Twist	Beams	Cones	Cakes
75/30/3	1.06	.94
100/40/2Z	.93	....	....
100/40/392	.84
100/40/598	.88
100/60/2Z92	....
100/60/394	.86
125/40/2Z	.89	....	....
125/40/390	.81
150/40/0 NS71½	....
150/40/2Z NS	.78	....	....
150/40/376½	.73
150/40/587	.83
150/40/892	.88
150/80/0 NS74½	....
250/80/071	....
250/80/377	.74
300/50/0 NS67	....
300/50/2Z NS	.69	....	....
300/50/367½	.66
450/120/0 NS64	....

Terms: Net 30 days. Transportation prepaid or allowed to any destination in U. S. A.

Prices subject to change without notice.

All previous prices withdrawn.

Prices on unlisted items can be obtained upon request.

Orders are subject to conditions of sale appearing on our acknowledgments of orders.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept. Current Prices

Effective with orders March 11, 1959

Bright and Dull

Den.	Fil.	Turns/ Inch Up to	Type	Beams	Cones (A) Tubes	Cakes
40	20	3	Textile "Cordura"	....	\$1.93	\$1.88
50	20	3	....	....	1.66	....
50	20	3	Textile "Cordura"	....	1.68	1.63
50	35	3	Textile "Cordura"	....	1.73	....
75	10	3	Bright	....	....	.98
75	30	3	....	\$1.10	1.10	.98
100	15	3	Bright	....	....	.86
100	40	3	Bright	.94	.94	.86
100	60	3	Dull	....	.96	.88
125	50	3	....	....	.92	.83
150	40	3	....	....	.79	.79
150	60	3	Bright	....	.79	.75
150	60	3	Textile "Cordura"	....	....	.845
150	90	3	Dull	....	.80	....
150	100	3	Dull	....	.80	....
300	50	2.5	....	.70	.70	.68
300	120	3	Textile "Cordura"	.71	.71	.69
450	72	3	....	.68	.66	.64
600	96	3	Bright	.68	.66	.64
600	240	3	Textile "Cordura"	.69	.67	.67
900	50	3	Bright	.68	.66	.64
900	144	3	Bright	.68	.66	.64
1165	480	3	Textile "Cordura"	.69	.67	.65
1800	100	3	Bright	....	.66	....
2700	150	3	Bright	.68	.66	....

Thick and Thin

100	40	3	#7 Bright	1.38	....
150	90	3	#7 Bright	1.05	....
200	80	3	#7 Bright	1.05	....
450	100	3	#7 Bright	.89	....
1100	240	3	#60 Bright	1.00	....
2200	480	3	#60 Bright	.95	....

Monofil

150	1	3	Bright	1.35	1.35
300	1	3	Bright	1.15	1.10
600	1	3	Bright	1.00

Plush

300	30	3	Dull	.82	.78
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(A) 2¢/lb. additional for cones less than 3#.

Terms: Net 30 days.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route within the continental limits of the United States, excluding Alaska.

* "CORDURA" and "SUPER CORDURA" are Du Pont's registered trade-marks for its high tenacity rayon yarn.

Industrial Rayon Corp.

Effective March 9, 1959

Continuous Process Textile Yarns

Denier	Fila- ment	Turns per In.	Type	Beams	2.8# Cones	4.4# Cones and Tubes	Skeins
150	40	2.5"S"	Bright	.79	.79	....	.88
200	20	2.5"S"	Bright	.78	.78	....	.87
300	44	2.5"S"	Bright	.70	.70	....	.76
450	60	2.0"S"	Bright	.66	....	.66	.73
600	90	1.5"S"	Bright	.66	....	.66	.73
900	50	2.0"S"	Bright	.66	....	.66	.73
900	150	1.5"S"	Bright	.66	....	.66	.73
1100	480	2.0"Z"	Bright extra strong	.66	....	.66	.73

Standard skein lengths—150 denier, 16,300 yards; 300 denier, 6,500 yards; 450 denier, 4,400 yards; 600 denier, 3,200 yards; 900 denier, 2,100 yards; 1100 denier, 2,000 yards.

Lustre #4 is semi-dull.

Prices are subject to change without notice.

Strawn Yarns

Denier	Fila- ment	Turns per In.	Type	Beams	4.4# Cones	Spools and Tubes	Skeins
150	1	0	Bright and Dull	1.25	1.30	....	1.35
150	1	2	Bright and Dull	1.25	1.30	....	1.35
300	1	0	Bright and Dull	1.10	1.15	....	1.20
300	1	2	Bright and Dull	1.10	1.15	....	1.20
450	1	0	Bright and Dull	1.00	1.05	....	1.10
450	1	2	Bright and Dull	1.00	1.05	....	1.10
1250	1	0	Bright and Dull	1.00	1.05	....	1.10
1250	1	2	Bright and Dull	1.00	1.05	....	1.10

Tubes—5¢ per pound over cone prices.

Skeins—10¢ per pound over cone prices.

Terms: Net 30 days f.o.b. point of shipment; title to pass to buyer on delivery of goods to carrier. Domestic transportation charges prepaid with transportation allowed at lowest published rate to all points east of the Mississippi River.

Prices are subject to change without notice.

**NO YARN TRAPPING WITH
BRAZED ALUMINUM TWO POUND TAKE-UP BOBBIN**



New aluminum take-up bobbin with barrel and heads brazed together into a single unit prevents yarn trapping. Exceptional strength at price no higher than ordinary bobbins.

Write us today for full details.



ALLENTOWN BOBBIN WORKS, INC.

ALLENTOWN

PENNSYLVANIA

*Modesty is a strange thing —
when you think you've got it you've lost it.*



We who manufacture

LAMBERTVILLE THREAD GUIDES

are on guard against false modesty too, but we do take justifiable pride in the high quality of our porcelain guides. They are hard, smooth, long wearing and always accurately made. Every guide is carefully inspected before leaving our plant. Available in white or "Durablu" finish.

Lambertville Ceramic
AND MANUFACTURING COMPANY
LAMBERTVILLE, NEW JERSEY

LAMBERTVILLE: YOUR GUIDE TO BETTER OPERATIONS!

JULY, 1959

**The
Laurel Leaf**

BUSINESS MAGAZINE EDITION

LAURAVEL SC

**A versatile softener for finer finishing
of all types of yarns and fabrics.**

If you are looking for a softener just a "little better than the rest," you should know about LAURAVEL SC, a nonionic softener recommended for the fine finishing of all types of yarns and fabrics . . . especially cotton goods. It's available as a soft liquid paste that's readily dispersable in hot water. It bestows full-bodied softness to fabrics, resists aging, and will not alter shades nor yellow whites.

Much of LAURAVEL SC's wide popularity results from its high resistance to salts, acids, and alkalis. It is stable in salt, Epsom Salt, and acid-chrome finishing baths, and may—under certain conditions—be used in the presence of 1% to 2% solutions of salt, making it ideal for softening many direct colors where a salt color fixative is used.

LAURAVEL SC is more compatible than many of its anionic counterparts with other finishing agents, such as resins and dextrines. Fabrics finished with it show excellent resistance to scorching. Used as a top softener in resin-treated goods, it is stable to residual products in the goods. It gives a superior lubrication to improve sewing and cutting properties, and adds good napping characteristics to fabrics. It gives a hand far less limp and raggy when used as a replacement for many conventional oils and softeners in compressive shrinking processes.

It's really easy to prepare and apply LAURAVEL SC—just mix with hot water and add to the last rinse. For finishing mixes, it may be added directly to the batch and boiled up with the rest of the ingredients. And, you can apply it with virtually any type of equipment.

Write for a generous free sample and see for yourself what excellent results you'll obtain.



Laurel SOAP MANUFACTURING CO., INC.

TIOGA, THOMPSON & ALMOND STS., PHILA. 34, PA.

Warehouses: Paterson, N.J. Chattanooga, Tenn.
Charlotte, N.C. Greenville, S.C.

North American Rayon Corp.

Current Prices

Prices Effective March 6, 1959

First Quality Yarns	Den./Fil.	Cones					
		Twist	Knitting* Cones	No Twist Knitting Cones	Weaving Cones	Velvet Beams & Cones	Untreated Cakes
75/30		3.5			1.10		.98
75/30		7			1.23		
75/30		12			1.31		
75/30		15			1.33		
75/30		20			1.36		
100/40/60		3.5			.94		.86
100/40		12			1.18		
125/52/60		3			.92		.83
Normal Strength Yarns		0		.71 1/2			
NARCO	150/42/60	3	.77 1/2		.79		.75
	300/75	0		.68			
	300/75	3	.70		.70		.68
	900/46	2.5	.66		.66		
	1800/92	2.5	.66		.66		

* Oiled Cones \$.01 Per Pound extra for Graded Yarns only.

** 1 lb. tubes \$.02 Per Pound extra for Graded Yarns only.

Terms: Net 30 days, F.O.B. shipping point, minimum freight allowed to consignee's nearest freight station east of the Mississippi River. To points west of the Mississippi River minimum freight to Memphis, Tennessee allowed. Goods after shipment shall be at buyer's risk. Merchandise transported in seller's own trucks or those of its affiliates is sold F.O.B. delivery point.

Prices subject to change without notice.

TRIACETATE

Celanese Corp. of America

Current Prices

Arnel Yarn Prices

Bright & Dull

Effective August 19, 1958

Denier and Filaments	Cones	Beams	Thick and Thin Cones
55/WKZ/15	\$ 1.32	\$1.16	\$.98
55/2Z/15		1.33	
75/WKZ/20		1.16	
75/2Z/20	1.21	1.22	
100/2Z/26	1.14	1.15	
150/2Z/40	.95	.96	
200/2Z/52	.92	.93	1.25
300/2Z/80	.87	.88	1.23
450/2Z/120	.86	.87	
600/2Z/160	.85	.86	1.21

3 to 5 Turns on Cones or Beams—\$.02 Additional

Premium for Black Arnel—\$.25 Per Pound

Premium for Navy Arnel—\$.37 Per Pound

Terms: Net 30 days. Transportation prepaid or allowed to any destination in U.S.A.

Prices subject to change without notice.

All previous prices withdrawn.

Note: Prices on unlisted items can be obtained upon request.

Orders are subject to conditions of sale appearing on our Acknowledgments of Orders.

CELLULOSIC HIGH TENACITY YARN and FABRIC

American Enka Corp.

Effective December 19, 1958

Tempra (High Tenacity)

Denier	Elongation	Beams & Cones
1100/480	Low	.62
1230/480	High	.62
1650/720	Low	.56
1820/720	High	.55
2200/960	High & Low	.55

* 1100/720

* 1650/1100

2200/960

Terms: Net 30 days, f.o.b. Enka, North Carolina, or Lowland, Tennessee; minimum freight allowed to first destination east of the Mississippi River.

* Tyrex certified viscose yarn.

American Viscose Corp.

Effective February 2, 1959

Revised March 26, 1959

Tyrex

Tyrex Certified Viscose Tire Yarn

Denier	Filament	Twist	Beams	Cones
1100	980	0	.66	.66
1100	980	Z	.66	
1650	980	0	.60	.60
1650	980	Z	.60	

Tire Fabric Made with Tyrex Certified Viscose

Tire Yarn and Cord

Denier	Filament	Caracas	Top Fly	Breaker
1100	980/2	.78	.78	
		Factor* Open-525	300-490	115-275
1650	980/2	.69	.70	.725

* Factor determined by dividing total ends by picks.

Tyrex is a certification mark of Tyrex Inc. for Viscose Tire Yarn and Cord.

Rayon Tire Yarn

Yarn

Super "Rayflex"

Denier	Filament	Twist	High Strength	Tire Yarn	110-210-310	120-220-320
1100	490	Z		.62		
1100	980	0-Z			.65	.66

1150	490	Z	.62			
1230	490	Z	.62			
1650	980	Z	.56	.56	.59	.60
1650	980	0		.56		.60
1875	980	Z	.56		.59	.60
2200	980	0		.55		.59
3300	1960	0				.59

High Strength available on cones — tubes — beams.

Tire Yarn and Super "Rayflex"

0 twist — Available on cones, beams or 10# tubes.

Z twist — Available on beams.

Sewing Thread

1100/980 Super "Rayflex"	0-Z	Cones	.63
1780/980 Super "Rayflex"	0-Z	Cones	.58

Also available in colors at .07 premium.

All yarns sold "Not Guaranteed for Dyeing".

Rayon Tire Fabric

1100	490	Tire	.74	.74	.74
1100	980	Super-110-210-310	.77	.77	.77
1100	980	Super-120-220-320	.78	.78	.78

Factor* Open-525 300-490 115-275

* Factor determined by dividing total ends by picks.

Cord on cones in regular Tire Yarn twists same as fabric prices.

Other twist combinations — prices quoted on request.

When supplied, yarns and cords in special packages take premiums indicated.

10.5 oz. Wardwell tubes .09

1.5 lb. Regular Braider tubes .05

Adhesive Dipped yarn .05

The following deposit charges are made on invoices.

Beams \$55.00 each

Crates (Metal) 75.00 each

Fabric Shell Rolls 3.50 each

Same to be credited upon return in good condition — freight collect.

Rayon Tire Yarn and Fabric

Terms: Net 30 days. Seller to select and to pay transportation charges of common and contract carrier except when shipment moves West of Mississippi River in which event only the actual cost of transportation to the Mississippi River crossing based on the lowest published freight rate, shall be allowed. Title to pass when merchandise is delivered to consignee. Transportation allowance based on lowest published volume rate shall be granted if merchandise is transported from shipping point in vehicle owned or leased and operated by buyer and title to pass when merchandise is delivered to same.

Prices subject to change without notice.

Celanese Corporation of America

Effective December 27, 1955

Fortisan Yarn Prices

Denier	Packages	Natural	Black
30/2.5/40	2 lb. Cones	\$3.00 lb.	\$3.35 lb.
60/2.5/80	4 " "	2.40 "	2.75 "
90/2.5/120	4 " "	2.25 "	2.60 "
120/2.5/160	4 " "	2.05 "	2.40 "
150/2.5/180	4 " "	1.95 "	2.30 "
270/2.5/360	4 " "	1.85 "	2.20 "
300/2.5/360	4 " "	1.85 "	2.20 "

60/2.5/80 Olive Green—Spun Dyed—OG106

Terms: Net 30 days. Shipments prepaid to any destination in U.S.A.

Prices subject to change without notice.

All previous prices withdrawn.

Prices on unlisted items can be obtained upon request.

Orders are subject to conditions of sale appearing on our acknowledgments of orders.

Fortisan-36 Rayon Yarn

Bright

Denier and Filament	Twist	4# cones	8# cones	Tubes	Beams
270/280	0.8Z	\$2.30			
300/280	0.8Z	\$2.05			
300/280	3Z	\$2.20			
400/400	0.8Z	\$1.75			\$1.70
400/400	0			\$1.75	
800/800	0.8Z	\$1.25	\$1.25		\$1.20
800/800	3Z	\$1.40			
800/800	0			\$1.25	
1600/1600	0.8Z	\$1.15	\$1.15		\$1.10
1600/1600	2 1/2 Z	\$1.30			
1600/1600	0			\$1.15	

Terms: Net 30 days. Shipments prepaid to any destination in U.S.A.

Prices subject to change without notice.

All previous prices withdrawn.

Prices on unlisted items can be obtained upon request.

Orders are subject to conditions of sale appearing on our acknowledgments of orders.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept. Current Prices

Effective with orders February 26, 1959

"Super Cordura"*

Den Fil	Turns/in	All Packages
1100-720	2	\$.66
1200-720	2	.66
1530-960	2	.63
1600-960	2	.60
1650-1100	2	.60
1800-1100	2	.60
2200-1440	2	.57
2400-1440	2	.57

Terms: Net 30 Days.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route within the continental limits of the United States, excluding Alaska.

* "CORDURA" and "SUPER CORDURA" are DuPont's registered trade-marks for its high tenacity rayon yarn.

ITT Increases Membership

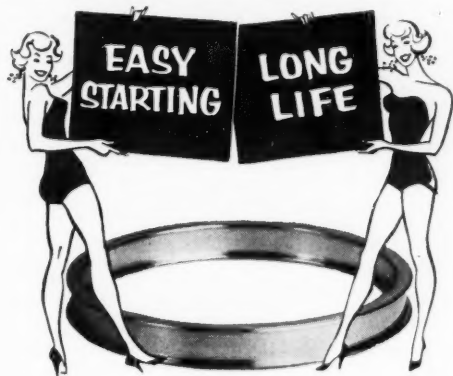
Roger Milliken, president of Deering, Milliken & Co., was reelected chairman of the board of the Institute of Textile Technology, Charlottesville, Va., at a recent two-day meeting. Also renamed were: vice chairman, J. L. Lanier, West Point Manufacturing Co.; Institute president, Dr. L. H. Hance; secretary, C. H. Merriman, Jr., Crompton-Shenandoah Co., and treasurer, Percy S. Howe, Jr., American Thread Co.

In his report for 1958, Dr. Hance said that over 500,000 new spindles have been added to membership in the past year, which represents about a 15% increase in the number of spindles represented in Institute membership.

Wool Fabric Quota Set

The National Association of Wool Manufacturers is "gratified" by President Eisenhower's proclamation of April 21 continuing the U.S. tariff-rate quota on imported wool fabrics, according to William I. Kent, president. He said that the quota system, to some degree, provides fairer competition in this country between low-wage imported fabrics and American-made goods.

The 1959 tariff-rate quota permits 13,500,000 pounds of imported cloth to enter at 25% of value (20% on billiard cloth). When this break-point is exceeded the duty rises to 45% for the remainder of the year except on narrow hand-woven goods, certain religious goods and certain high-priced goods for which the remedial duty is 30% of value. In addition if 350,000 pounds of the high-priced goods enter at the 30% rate, the duty then will rise to 45%. The 13,500,000 pound break-point is not less than 5% of U. S. production of "similar" goods averaged over the three prior years, 1956, 1957, and 1958.



Why settle for one without the other?

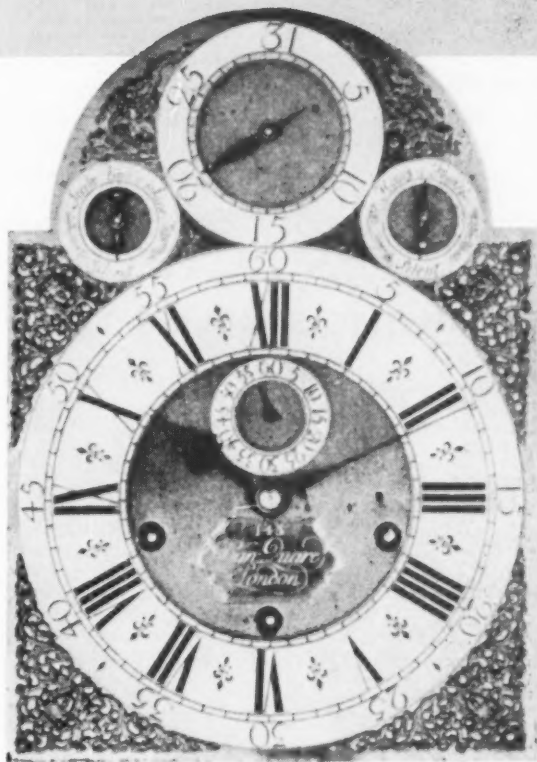
Easy Starting is often over-sold because it can immediately be recognized and enjoyed. But Long Life, which takes time to prove out, is of course far more valuable. DIAMOND FINISH rings last extra long — that is an historical fact. They are also the easiest starting rings consistent with assured smooth running over a long life.

WHITINSVILLE (MASS.)
SPINNING RING CO.
Makers of Spinning and Diamond Finish Twister Rings since 1873

Rep. for the Carolinas & Va.: W. K. SHIRLEY, P.O. Box 406, Belmont, N. C.
 Rep. for Ala., Ga. & Tenn.: H. L. WILLIAMS, Box 222, West Point, Ga.

Time Is Money

BENJAMIN FRANKLIN



Very rare clock dial designed by "Daniel Quare" of London in 1720.

"Time is my estate", said Goethe. To all successful businessmen, time is a valued asset. They employ Factoring to release valuable time to plan for the Future.



ISELIN-JEFFERSON FINANCIAL COMPANY, INC.

Jarvis Cromwell, President

111 WEST FORTIETH STREET, NEW YORK 18, N. Y.

Industrial Rayon Corporation

Effective March 1, 1959

Unbleached Bright High Tenacity Yarns

Single End Beams and Cones—Type 100

Denier	Filament	Turns per Inch	Beams	4.4# Cones
1100	480	1.5 "Z"	.62	.62
1650	720	1.5 "Z"	.56	.56
2200	1000	1.5 "Z"	.55	.55
3300	1440	1.5 "Z"	.55	.55
4400	2000	1.5 "Z"	.55	.55

Type 400 prices are 4¢ more.

Terms: Net 30 days f.o.b. point of shipment, title to pass to buyer on delivery of goods to carrier. Domestic transportation charges allowed at lowest published rate to all points east of the Mississippi River.

PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

North American Rayon Corporation

Super Super High Strength

Continuous Yarn Type 710

1100/720 1.6Z

1650/720 2.0Z

Tire Cord Fabrics

Super Super High Strength Type 710

1100/720

1650/720

Terms: Net 30 days, f.o.b. shipping point. Minimum freight allowed to consignee's nearest freight station East of the Mississippi River. To points West of the Mississippi River minimum freight to Memphis, Tenn. allowed. Goods after shipment shall be at buyer's risk. Merchandise transported in seller's own trucks or those of its affiliates is sold f.o.b. delivery point.

CELLULOSIC STAPLE & TOW ACETATE

Celanese Corp. of America

Current Prices

Effective March 2, 1959

Staple

(Most Deniers Available in Bright or Dull Luster)

Celanese Acetate Staple

3, 5.5 & 8 Denier

(Regular Crimp, Type HC, Type D)

2, 12 & 17 Denier

(Regular Crimp, Type HC, Type D)

35 Denier

50 Denier

Type F—5.5 & 8 Denier

Type F—12 & 17 Denier

Type K—(Available under Celanese License Agreement)

¾" to 1½" length (All Deniers)

35 Denier Flat Filament Acetate

Non-Textile Acetate Fibers

Tow (Celatow)

3, 5.5 & 8 Denier

2, 12 & 17 Denier

35 Denier

50 Denier

35 Denier Flat Filament Acetate Tow

50 Denier

Terms: Net 30 days. Transportation prepaid or allowed to any destination in U.S.A. east of Mississippi River. Transportation prepaid to any U.S.A. destination west of Mississippi River, but charge is made for the portion of transportation from river crossing nearest customer's location.

Prices subject to change without notice.

All previous prices withdrawn.

* No transportation allowed (F.O.B. shipping point.)

Note: Prices on unlisted items can be obtained upon request.

Orders are subject to conditions of sale appearing on our acknowledgments of orders.

CROSS-LINKED

Courtaulds (Alabama) Inc.

Effective April 14, 1959

Corval™

Man-made, cross-linked, cellulosic staple,

Bright and Dull, 1½, 3 and 5½ denier

\$.40 per lb.

TopeI®

Man-made, cross-linked, cellulosic staple,

Bright and Dull, 1½, 3 and 5½ denier

\$.37 per lb.

Terms: Net 30 days f.o.b. LeMoyne, Alabama; Minimum transportation allowed to points in U.S.A. east of Mississippi River.

RAYON

American Viscose Corp.

Current Prices

Rayon Staple

Regular	Bright and Dull
"Viscose 22"	\$.33
Extra Strength	
1.0 Denier	.36
"Viscose 32A"	.36
"Avisco XL"	
1.0 Denier	.42
1.5 & 3.0 Deniers	.39
"Avisco Crimped"	
1.25 Denier	.36
3.0 & 5.5 Deniers	.34
8.0 & 15.0 Deniers	.35
"Avisco Super L"	
8.0, 15.0 & 22.0 Deniers	.36

COLORSPUN STAPLE

1.5 Denier 1 9/16"

Color	Code	Price
Sea Foam	517	47¢
Spun Gold	614	47¢
Cascade	419	42¢
Silver Gray	208	42¢
Bridal Rose	710	42¢
Pale Pink	708	42¢
Rosewood	835	47¢
Bisque	803	42¢
Champagne	833	42¢
Sandalwood	802	42¢
Apple Red	700	58¢
Mint Green	505	47¢
Pale Pink	708	42¢
Bisque	803	42¢
Sandalwood	802	42¢
Nutmeg	801	47¢
Gold	603	47¢
Turquoise	408	42¢
Wine	304	58¢
Gray	208	42¢
Spice Brown	800	47¢

3.0 Denier 2"

Rayon Tow	Price
Grouped Continuous Filaments (200,000 Total Denier)	
1.5, 3.0 & 5.5 Denier Per Filament	.35
9.0 Denier Per Filament	.37
Terms: Net 30 days.	

American Enka Corp.

Current Prices Effective 7/1/59

Rayon Staple

Regular

1.5 and 3 denier	Brt.	Dull
	\$.33	\$.33
6.5 denier	.34	
8 denier	.35	
15 denier	.35	.35

Crimped

Celanese Corp. of America

Current Prices

Effective May 1, 1959

Rayon Tow

Bright & Dull

1.5, 3, 5.5 D.P.F.	Price
Total denier 200,000	.37
8 D.P.F.	.37
Total denier 207,000	

Terms: Net 30 days. Transportation prepaid or allowed to any destination in U.S.A. East of Mississippi River. Transportation prepaid to any U.S.A. destination West of Mississippi River, but charge is made for the portion of transportation from river crossing nearest customer's location.

Prices subject to change without notice.

All previous prices withdrawn.

Note: Prices on unlisted items can be obtained upon request.

Orders are subject to conditions of sale appearing on our Acknowledgments of Orders.

Courtaulds (Alabama) Inc.

Effective April 14, 1959

Rayon Staple

1½ and 3 denier	Bright	Dull
Available in 1½", 1-9/16" and 2".	\$.33	\$.33
3 and 5½ denier	\$.34	\$.34
Available in 1-9/16" and 3".		
3 denier		.34
Available in 2".		

Coloray® Solution Dyed Rayon Staple

Color	Price per lb.
Black	39¢
Silver Grey	41¢
Mocha	41¢
Tan	41¢
Medium Brown	41¢
Aqua	42¢
Rose	42¢
Dawn Pink	42¢
Ecu	42¢
Dark Brown	42¢
Slate Grey	45¢
Sulphur	46¢
Nugget	46¢
Light Blue	46¢
Crystal Blue	47¢
Apple Green	47¢
Sage	47¢
Peacock Blue	48¢
Medium Blue	48¢
Indian Yellow	51¢
Dark Blue	51¢
Hunter Green	51¢
Turquoise	52¢
Malachite Green	53¢
Red	58¢

In addition to the above, Black is also available in:
1½ den. 1½" 5½ den. 3"
3 den. 1½" 5½ den. 6"
3 den. 1-9/16"

Terms: Net 30 days f.o.b. LeMoyne, Alabama; Minimum transportation allowed to points in U.S.A. east of Mississippi River.

Accurate



Yarn is under perfect tension from a central location. One dial adjustment changes tension uniformly at all tension stations.

The Lindly Electrotense: Simple, compact, inexpensive. Accurately controls yarn tension from zero to about 20 grams.

DIAL CONTROL
of YARN TENSION

at Any Number of Stations!

The Lindly ELECTROTENSE is the new, inexpensive, electro-mechanical way to control yarn tension from almost zero to about 20 grams. A turn of a single, centrally located dial applies desired tension evenly and simultaneously at all tension stations.

What are the advantages?

The Lindly ELECTROTENSE permits easy, instant change of yarn tension. It results in more uniform beams, more yarn per warp beam, less maintenance and machine down-time, fewer broken ends and better cloth.

GET THE FULL FACTS ON THIS NEW TIME-SAVING, QUALITY-IMPROVING, COST-CUTTING LINDLY SYSTEM. WRITE, WIRE OR PHONE TODAY!

It Pays to Know



the Lindly Count

LINDLY & COMPANY, INC.
248 HERRICKS ROAD
MINEOLA, NEW YORK

News (Continued from Page 49)

Tyrex Cord Expansion

Tyrex viscose tire cord is currently in short supply and conversion of additional facilities to its manufacture is planned, according to Hayden B. Kline, Industrial Rayon Corp. president. He told his company's annual meeting that all tire cord production at the company's Painesville, Ohio, plant is devoted to Tyrex cord and that facilities at its Cleveland plant will be changed over to Tyrex cord "as soon as commitments for that plant's rayon cord are fulfilled."

Lurex Beaming Program

Dow Chemical Co.'s textile fibers department has announced a new program to help customers obtain Lurex metallic yarns on beams. The program enables mills to overcome low sley limitations of the cotton system slasher and permits manufacture of top beams for Lurex for two-beam work where facilities are not available in the mill to do so. Cadillac Warping and Sizing Co., Inc., have done considerable work in helping establish the program with Dow's textile fibers department and is a recommended source of the beams. Dow also is advising customers to secure quotations directly from commissioned warpers of their own choice. For further information write the editors.



C. Chester Bassett, Jr.

Patrick A. DeBiase has been elected vice president of marketing at Bigelow-Sanford Carpet Co., Inc., and C. Chester Bassett, Jr. has been elected vice president of the company's Hartford Rayon Division.

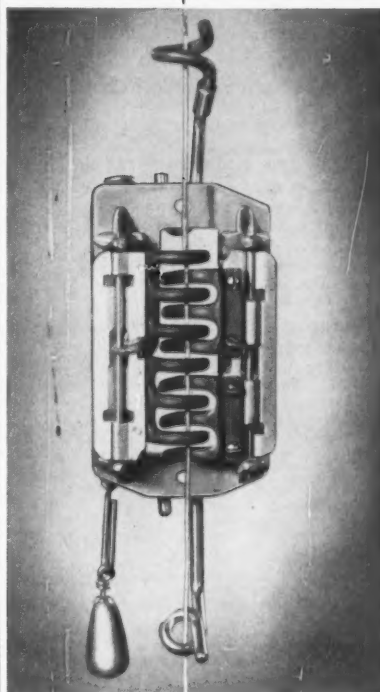
N. E. Richards has retired from his position as vice president in charge of braiding for Textile Machine Works. He had been with the company since February, 1906. Donald L. Young has been appointed manager of Textile Machine Works' braiding machine division, succeeding Mr. Richards.

Horace A. Carter, president and treasurer of the William Carter Co. died at the age of 90 after a long illness.

try
HEANIUM

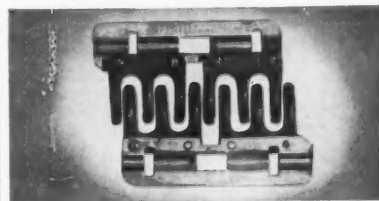


**HEANIUM TENSION FINGERS
AND PIGTAILS FOR TENSION
ASSEMBLIES ELIMINATE
YARN DAMAGE**



If guide wear is a problem in your mill . .

try **HEANIUM T-3-F
FINGER ASSEMBLIES**



HEANY INDUSTRIAL CERAMIC CORP.
NEW HAVEN 3, CONNECTICUT

Southern Representative: R. L. Carroll, P. O. Box 1676,
Greenville, S. C.

The Hartford Fibres Co. Div. Bigelow-Sanford Carpet Co., Inc.

Rayon Staple

Effective November 3, 1958
REGULAR

1.5 denier Bright	
19/16", 2"	.33
8 denier 3" Bright	.35
15 denier 3" Bright	.35
15 denier 3" Dull	.35

"KOLORBON"—Solution Dyed Rayon Staple—3" and 6"

	8 Denier Bright	15 Denier Dull	15 Denier Bright
Cloud Grey	.46	.46	
Sandalwood	.46	.46	
Nutria	.46	.46	
Sea Green	.46	.46	
Mint Green	.46	.46	
Champagne	.46	.46	
Midnight Black	.46	.46	.46
Gold	.49	.49	
Turquoise	.46	.46	
Melon	.49	.49	
Capri Blue	.46	.46	
Charcoal Grey	.46	.46	
Coco	.47	.47	
Sable	.46	.48	
Tangerine	.66	.66	
Chinese Red	.66	.66	
Larkspur Blue	.46	.46	
Royal Blue	.66	.66	
Lemon Peel	.55	.55	.55
Kelly Green	.55	.55	.55
Bitter Green	.66	.66	

Terms: Net 30 days. Prices are quoted f.o.b. shipping point, lowest cost of transportation allowed, or prepaid. To points West of the Mississippi, lowest cost of transportation allowed to the Mississippi River crossing.

North American Rayon Corporation Current Prices

Rayon Staple

Super High Tenacity	Bright
No. 1 (Unshrunk)	
1, 1.5 & 3 deniers	.40
No. 2 (Preshrunk)	
1, 1.5 & 3 deniers	.40

Rayon Tow

Super High Tenacity	
2200 denier, 1.0 and 1.5 D/F	57.5
4400 denier, 1.0 and 1.5 D/F	47.5

TRIACETATE

Celanese Corp. of America

Current Prices

Effective June 7, 1957

(Most Deniers Available in Bright or Dull Luster)

Arnel Staple and Tow

	Bright & Dull
Arnel Triacetate Staple	
2.5 Individual Denier	\$5.55
5.0 Individual Denier	.55
Arnel Triacetate Tow	
2.5 Individual Denier	\$6.60
114,000 Total Denier	
5.0 Individual Denier	.60
90,000 Total Denier or	
180,000 Total Denier	

Packaged on Ball Warps

Terms: Net 30 days. Transportation prepaid or allowed to any destination in U.S.A. east of Mississippi River. Transportation prepaid to any U.S.A. destination west of Mississippi River, but charge is made for the portion of transportation from river crossing nearest customer's location.

Prices subject to change without notice.

All previous prices withdrawn.

Note: Prices on unlisted items can be obtained upon request.

Orders are subject to conditions of sale appearing on our acknowledgments of orders.

NON CELLULOSIC YARN NYLON

Allied Chemical Corporation

Caprolan®

Effective April 15, 1959

Denier	Fila- ment	Turn/ In.	Twist	Type**	Package	1st Grade Price/Lb.
200	16	1 1/2	Z	B	Cone	\$1.40
840	136	1/2	Z	HBT	Aluminum Tube	1.20
840	136	1/2	Z	HBT	Beams	1.20
1050	56	1/2	Z	HB	Aluminum Tube	1.24
2100	112	1/2	Z	HB	Aluminum Tube	1.20
Heavy Yarn						
2100	408	0	O	HB	Paper Tube*	\$1.18
2500	408	0	O	HB	Paper Tube*	1.18
3360	544	0	O	HB	Paper Tube*	1.17
4200	680	0	O	HB	Paper Tube*	1.17
4200	224	0	O	HB	Paper Tube*	1.17
5000	816	0	O	HB	Paper Tube*	1.17
5800	952	0	O	HB	Paper Tube*	1.17
7500	1224	0	O	HB	Paper Tube*	1.16
10000	1632	0	O	HB	Paper Tube*	1.16
15000	2448	0	O	HB	Paper Tube*	1.16

Terms—Net 30 days.

Prices subject to change without notice.

All prices quoted F.O.B. Shipping Point.

Following are invoiced as a separate item.

Bobbins—45 cents each.

Aluminum Tubes—40 cents each.

Beams—\$220.00 each.

Cradles for Beams—\$53.00.

* Paper Tubes non-returnable, no charge.

** Type is used to describe luster and tenacity

Minimum transportation charges allowed and prepaid in continental United States, excluding Alaska.

B—Bright.

H—High Tenacity.

T—Heat Stabilized.

American Enka Corporation

Enka Nylon Yarn Prices

Effective August 19, 1958

Den/Fil	Twist	Luster	Type	Tenacity	Pkg.	Net Wt. Pkg.	Price/Pound Std. Sub.
15 monofil	0.5Z	Semi-dull	9508	Normal	Pirn	2 lb.	5.25 5.00
15 monofil	0.5Z	Semi-dull	9508	Normal	Beam		5.36
15 monofil	0.5Z	Dull	9514	Normal	Pirn	2 lb.	5.30 5.05
15 monofil	0.5Z	Dull	9514	Normal	Beam		5.41
15/2	0.5Z	Semi-dull	9518	Normal	Pirn	1 lb.	7.37 6.70
18/2	0.5Z	Semi-dull		Normal	Pirn		6.65 6.10
20 monofil	0.5Z	Semi-dull	9524	Normal	Pirn	1 lb.	4.95 4.50
20/2	0.5Z	Semi-dull	9478	Normal	Pirn	1 lb.	5.55 5.05
30/4	0.5Z	Semi-dull		Normal	Pirn		2.62 2.42
30/6	0.5Z	Semi-dull	9464	Normal	Pirn	2 lb.	2.36 2.21
40/8	0.5Z	Semi-dull	9448	Normal	Pirn	2 lb.	2.01 1.91
40/8	0.5Z	Semi-dull	9448	Normal	Beam		2.11
40/10	0.5Z	Dull	9502	Normal	Pirn	2 lb.	2.06 1.96
40/10	0.5Z	Dull	9502	Normal	Beam		2.16
50/13	0.5Z	Semi-dull	9528	Normal	Pirn	2 lb.	1.91 1.76
70/32	0.5Z	Semi-dull	9622	Normal	Pirn	2 lb.	1.71 1.66
100/32	0.5Z	Semi-dull	9652	Normal	Pirn	2 lb.	1.65 1.60
200/16	0.5Z	Bright	9826	Normal	Cone	4 lb.	1.49 1.44
200/16	0.5Z	Bright	9826	Normal	Beam		1.54
200/34	0.6Z	Bright	9832	Normal	Cone	4 lb.	1.49 1.44
200/34	0.5Z	Bright	9832	Normal	Beam		1.54

Firms charged at \$.25 or \$.45 each, depending on type. Deposit refunded upon return of pirn in good condition. Cones are non-returnable. Beams and cradles are deposit carriers and remain property of American Enka Corporation.

Terms: Net 30 days. Minimum common carrier transportation charges will be prepaid and absorbed to the first destination in the continental United States. In prepaying transportation charges, the seller reserves the right to select the carrier used.

The Chemstrand Corp.

Current Prices

Effective June 2, 1958

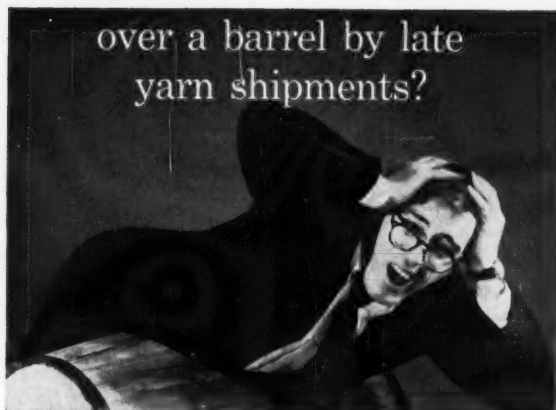
Denier	Filament	Twist	Type*	Package	Standard Price/Lb.	Second Price/Lb.
10	1	O	SD	Bobbins	\$8.42	\$7.81
15	1	O	SD	Bobbins	5.25	5.00
15	1	O	SD	Spools	5.36	
15	1	O	D	Bobbins	5.30	5.00
15	1	O	D	Spools	5.41	
20	7	Z	D	Bobbins	2.96	2.61
30	10	Z	SD	Bobbins	2.36	2.21
30	10	Z	D	Bobbins	2.41	2.21
30	10	Z	HSD	Bobbins	2.36	2.21
30	26	Z	SD	Bobbins	2.49	2.21
40	7	Z	SD	Bobbins	2.11	1.81
40	10	Z	SD	Bobbins	2.01	1.91
40	13	Z	SD	Bobbins	2.01	1.91
40	13	O	SD	Draw Wind	2.01	1.91
40	13	Z	SD	Spools	2.11	
40	13	Z	D	Bobbins	2.06	1.96
40	13	Z	D	Spools	2.16	
50	17	Z	SD	Bobbins	1.91	1.76
50	17	Z	SD	Draw Wind	1.91	1.76
70	34	Z	SD	Bobbins	1.71	1.66
70	34	O	SD	Draw Wind	1.71	1.66
70	34	Z	D	Bobbins	1.76	1.66
70	34	Z	D	Spools	1.86	
70	34	Z	HB	Bobbins	1.76	1.66
80	26	Z	SD	Bobbins	1.71	1.60
100	34	Z	SD	Bobbins	1.65	1.60
100	34	Z	SD	Spools	1.75	
100	34	Z	HB	Bobbins	1.70	1.60
140	68	Z	SD	Bobbins	1.60	1.55
140	68	Z	SD	Spools	1.70	
140	68	Z	B	Bobbins	1.60	1.55
200	34	Z	B	Bobbins	1.49	1.44
200	34	O	B	Draw Wind	1.49	1.44
210	34	Z	HB	Bobbins	1.49	1.44
210	34	Z	HB	Draw Wind	1.49	1.44
210	34	Z	HB	Spools	1.54	
210	34	Z	HB	Beams	1.54	
210	34	Z	RHB	Bobbins	1.59	1.54
260	17	Z	HB	Bobbins	1.49	1.39
260	17	Z	HB	Spools	1.54	
420	68	Z	HB	Bobbins	1.39	1.29
520	34	Z	HB	Bobbins	1.39	1.29
630	102	Z	HB	Bobbins	1.39	1.29
780	51	Z	HB	Bobbins	1.39	1.29
840	140	Z	HB	Beams	1.20	1.15
840	140	Z	HB	Tubes	1.20	1.13
840	140	O	HB	Draw Wind	1.20	1.13
840	140	Z	RHB	Beams	1.20	1.15
840	140	Z	RHB	Tubes	1.20	1.13
1040	68	Z	SD	Tubes	1.24	1.14
1040	68	Z	HB	Tubes	1.24	1.14
1680	280	Z	HB	Tubes	1.12	
2080	136	Z	SD	Tubes	1.20	
15120	2520	Z	RHB	Tubes	1.16	

* Types: D—Dull; SD—Semi-dull; B—Bright; H—High tenacity.

Bobbins are invoiced at 25¢ or 45¢ each, depending on type; tubes are invoiced at 40¢ each; spools invoiced at \$77.00 and \$95.00 depending on type; and beams and crates for beams are invoiced at \$220 and \$25 respectively.

Prices subject to change without notice.

Freight prepaid within Continental United States and Puerto Rico.



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125 WEST 41st STREET, NEW YORK 36, LONGACRE 3-4200

PTI Honors Don Carlos

An honorary Doctorate of Laws was conferred upon Don Carlos J. Echevarria, president of Compania Columbiana de Tejidos, S. A., by the Philadelphia Textile Institute at the PTI graduation exercises on June 6. The honorary degree was bestowed in recognition of his leadership of the largest textile organization in South America and as a gesture of appreciation for the friendship between the U. S. and its Latin American neighbors. Don Carlos has actively managed his company since 1940, when it had 400 employees and a capital of 3 million pesos. Today the firm employs 8,000 and has a capital of 270,000,000 pesos. The firm has sent and continues to send many students to PTI and other American institutions of higher learning.

Rule on Cotron Label

Use of the term Cotron by American Viscose Corp. for cotton-rayon blended fabrics will not be considered misleading by the Federal Trade Commission unless it is used on fabrics or garments to mislead purchasers as to fiber content. Rep. Frank Smith (Dem., Miss.), the National Cotton Council, and the National Grange, when American Viscose applied to the Patent Office for a trademark on the term for its cotton-rayon blend, protested to FTC, claiming the term was misleading and would be too easily confused with cotton. FTC Chairman John W. Gwynne, in a letter to Rep. Smith, pointed out that the Government agency had issued trade practice rules for the rayon and acetate textile industry and had received no indication that the fiber producer had not complied with the rules in its use of the term.

Brooker TTMA President

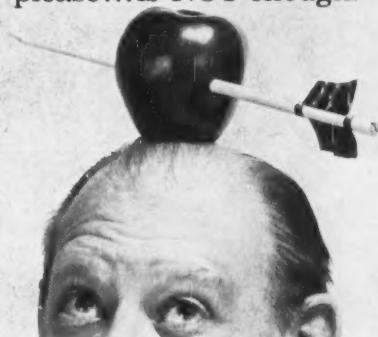
J. C. Brooker, president of Brooker Spread Co., was elected president of the Tufted Textile Manufacturers Association at its recent 14th annual convention in Hollywood Beach, Fla. A charter member of TTMA, Brooker had served two terms as vice president and was a member of the board of directors.



J. C. Brooker

E. D. Lacey, retiring president of the 14-year old association, said that there was no limit to the possibilities of tufted products in years to come. Comparing past growth in the tufted field, Lacey suggested that "the next decade would again see tremendous growth in the industry" and stated he thought it was within the realm of possibility that tufted volume could reach from six hundred to eight hundred million dollars within the next ten years.

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E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

Nylon Yarn

Denier & Filament	Turns/Inch & Twist	Type	Package	1st Grade	2nd Grade
7-1	0	200	Bobbin	\$9.47	\$8.82
10-1	0	200	Bobbin	8.42	7.82
12-1	0	200	Bobbin	7.35	6.85
15-1	0	200	Beam	5.36	
15-1	0	200	Bobbin	5.25	5.00
15-1	0	680	Beam	5.41	
15-1	0	680	Bobbin	5.30	5.00
20-1	0	200	Bobbin	4.95	4.50
14-2	0.2Z	200	Bobbin	7.90	7.30
17-2	0.2Z	200	Bobbin	7.05	6.50
20-2	0.2Z	200	Bobbin	5.55	5.05
15-3	0.2Z	200	Bobbin	6.10	5.60
21-3	0.2Z	200	Bobbin	5.48	5.05
20-7	0.5Z	200	Bobbin	2.91	2.61
20-7	0.5Z	200	Beam	3.02	
20-7	0.5Z	680	Bobbin	2.96	2.61
20-7	0.5Z	680	Beam	3.07	
20-20	0.7Z	200	Bobbin	6.00	
28-4	0.2Z	200	Bobbin	2.81	2.51
30-10	0.5Z	200	Bobbin	2.26	2.21
30-10	0.5Z	200	Tricot Bms	2.46	
30-10	0.5Z	300	Bobbin	2.51	2.36
30-10	0.5Z	680	Bobbin	2.41	2.21
30-10	0.5Z	680	Tricot Bms	2.51	
30-26	0	200	Bobbin	2.49	2.21
40-1	0	100	Bobbin	4.03	3.75
40-7	0.5Z	200	Bobbin	2.11	1.91
40-10	0.5Z	200	Bobbin	2.01	1.91
40-13	0.5Z	200	Bobbin	2.01	1.91
40-13	0.5Z	200	Tricot Bms	2.11	
40-13	0.5Z	400	Bobbin	2.13	1.90
40-13	0.5Z	680	Bobbin	2.06	1.96
40-13	0.5Z	680	Tricot Bms	2.16	
40-34	0.5Z	200	Bobbin	2.21	1.81
50-10	0.5Z	200	Bobbins	2.11	1.76
50-17	0.5Z	100/200	Bobbin	1.91	1.76
50-17	0	200	Tubes	1.91	1.76
50-17	0.5Z	680	Bobbin	2.01	1.76
60-20	0.5Z	200	Bobbin	1.82	1.65
60-34	0.5Z	300	Bobbin	1.86	1.76
70-17	0.5Z	200	Bobbin	1.71	1.66
70-34	0	100	Tubes	1.71	1.66
70-34	0.5Z	100/200	Bobbin	1.71	1.66
70-34	0	105/205	Paper Tube	1.71	1.66
70-34	0	200	Tubes	1.71	1.66
70-34	0.5Z	280	Bobbin	1.71	1.66
70-34	0.5Z	300	Bobbin	1.76	1.66
70-34	0.5Z	680	Bobbin	1.76	1.66
70-34	0	680	Tubes	1.76	1.66
80-26	0.5Z	200	Bobbin	1.71	1.60
90-26	0.5Z	200	Bobbin	1.76	1.66
100-34	0.5Z	200	Bobbin	1.65	1.60
100-34	0.5Z	300	Bobbin	1.70	1.60
100-34	0	300	Tubes	1.70	1.60
100-34	0.5Z	680	Bobbin	1.70	1.60
100-34	0.5Z	200	Bobbin	1.71	1.60
110-50	0.5Z	200	Bobbin	1.71	1.60
140-68	0.5Z	100	Bobbins	1.60	1.55
140-68	0	200	Tubes	1.60	1.55
140-68	0.5Z	200	Bobbin	1.60	1.55
140-68	0	205	Tube	1.60	1.55
140-68	0.5Z	300	Bobbin	1.65	1.55
200-20	1Z	100	Bobbin	1.49	1.44
200-34	0	100	Tubes	1.49	1.44
200-34	0.7Z	100	Bobbin	1.49	1.44
200-34	0	105	Tube	1.49	1.44
200-34	0.7Z	680	Bobbin	1.54	1.44
200-68	0.7Z	100/200	Bobbin	1.56	1.46
210-34	0	300	Tubes	1.49	1.44
210-34	0.7Z	300	Bobbin	1.49	1.44
210-34	0.7Z	300	Beam	1.54	
210-34	0	305	Tube	1.49	1.44
210-34	0.7Z	330	Bobbin	1.59	1.44
260-17	1Z	300	Bobbin	1.49	1.39
400-68	0.7Z	100	Bobbin	1.39	1.29
420-68	1Z	300	Bobbin	1.39	1.29
420-68	1Z	300	Beams	1.44	
520-34	1Z	300	Bobbin	1.39	1.29
630-102	0.7Z	300	Bobbin	1.39	1.29
780-51	1Z	300	Bobbin	1.39	1.29
800-140	0.5Z	100	Bobbin	1.39	1.29
840-140	0.5Z	300/700	Al. Tbs	1.20	1.13
840-140	0.5Z	300/700	Beam	1.20	
1680-280	0.5Z	300/700	Al. Tbs. & Beams	1.12	

Color-Sealed Yarn

Denier & Filament	Turns/Inch & Twist	Type	Package	1st Grade	2nd Grade
30-10	0.5Z	140	Bobbin	\$2.71	\$2.56
40-13	0.5Z	140	Bobbin	2.36	2.16
70-34	0.5Z	140	Bobbin	2.06	2.01
100-34	0.5Z	140	Bobbin	2.00	1.95
100-34	0	140	Tubes	2.00	1.95
200-34	0.7Z	140	Bobbin	1.84	1.79
260-17	1Z	140	Bobbin	1.84	1.79

Industrial Yarn

Denier & Filament	Turns/Inch & Twist	Type	Package	Price/Lb.
840-140	0.5Z	707	Cone	\$1.13
2520-420	0	700	Paper Tube	1.18
4200-700	0	700	Paper Tube	1.17
5040-840	0	700/707	Paper Tube	1.17
7560-1260	0	700/707	Paper Tube	1.16
10080-1680	0	700/707	Paper Tube	1.16
15120-2520	0	700/707	Paper Tube	1.16

These prices are subject to change without notice. Terms: Net 30 Days.

Types

- Type 100—Bright, normal tenacity.
- Type 105—Bright, normal tenacity, low shrinkage (5-7%)
- Type 140—Bright, color-sealed, black, normal tenacity.
- Type 200—Semidull, normal tenacity.
- Type 205—Semidull, normal tenacity, low shrinkage (5-7%)

Type 209—Semidull, normal tenacity, improved light durability and dye light fastness.

Type 280—Semidull, normal tenacity, improved light durability and dye light fastness.

Type 300—Bright, high tenacity.

Type 305—Bright, high tenacity, low shrinkage (5-7%)

Type 330—Bright, high tenacity, more heat & light resistant.

Type 400—Semidull, high tenacity.

Type 680—Dull, normal tenacity.

Type 700—Bright, high tenacity.

Type 707—Bright, high tenacity (over 8.5 gpd) cordage yarn.

Freight Terms—Terms are F.O.B. shipping point, freight prepaid our route within the continental limits of the United States, excluding Alaska.

Following are invoiced as a separate item.

Bobbins—25 cents or 45 cents depending on type

Aluminum Tube—40¢ each

Draw Winder Tubes—\$2.70 or \$1.00 depending on type

Tire Cord Beams—\$220.00 each

Cradles for Tire Cord Beams—\$115.00 each

Tricot Beams—\$95.00 each

Cradles for Tricot Beams—\$130.00 each

Beams and Cradles are deposit carriers and remain the property of E. I. du Pont de Nemours & Co., Inc.)

POLYESTER

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

"Dacron"

Denier & Filament	Turns/Inch	Luster	Type*	Tubes 1st Gr.
30-14	0	Bright	55	\$2.71
30-20	0	Semidull	56	2.71
40-27	0	Semidull	56	2.31
40-27	0	Bright	55	2.31
40-27	0	Dull	57	2.36
70-34	0	Semidull	56	1.91
70-14	0	Bright	55	1.91
70-34	0	Bright	55	1.91
70-34	0	Dull	57	1.96
100-34	0	Semidull	56	1.84
140-28	0	Bright	55	1.79
150-34	0	Semidull	56	1.79
220-50	0	Bright	55	1.76
250-50	0	Bright	56	1.76
1100-250	0	Semidull	59	1.50
1100-250	0	Bright	51	1.50
1100-250	0	Bright	52	1.50

Terms: Net 30 days.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route within the Continental limits of the U. S., excluding Alaska.

Yarn Types

* Type:

Type 51—Bright, high tenacity.

Type 52—Bright, high tenacity.

Type 55—Bright, normal tenacity.

Type 56—Semidull, normal tenacity.

Type 57—Dull, normal tenacity.

Type 59—Semidull, high tenacity.

Tubes are invoiced as a separate item at \$70 each.

"DACRON" is DuPont's registered trade-mark for its polyester fiber.

SARAN

The National Plastics Products Company—

Fibers Division

Odenton, Maryland

41 East 42 Street, New York 17, N. Y. (Oxford 7-8996)

Current Prices:

CONTINUOUS FILAMENT

Type	Twist p. l.	Natural	Colors
1240/10	3	\$1.32	\$1.37
750/20*	3	1.75	1.80

* For filter fabrics and other industrial purposes only.

F.O.B. Odenton, Maryland.

Terms: Net 30 days.

NON CELLULOSIC STAPLE & TOW

ACRYLIC

American Cyanamid Co.

Fibers Division

Effective Date: April 15, 1959

Cyanamid Acrylic Staple

	1st Grade Price (per pound)
2.0 Denier Bright and Semi-Dull	\$1.28
3.0 Denier Bright and Semi-Dull	1.18
5.0 Denier Bright and Semi-Dull	1.18
15.0 Denier Bright, Semi-Dull and Dull	1.01

Staple Lengths: 1½", 2", 2½", 3", 3½", 4½" (4½" in all Deniers except 15 Denier which is 4" Staple Length).

Information provided on request for Deniers, Lengths and Lusters not listed above.

Prices are subject to change without notice.

Terms: Net 30 Days.

F.O.B. Shipping Point—Minimum transportation allowed (Seller's route and method) within the continental limits of the United States excluding Alaska. If Buyer requests and Seller agrees to a route or method involving higher than minimum rate, Buyer shall pay the excess transportation cost.

Note: CRESLAN® is Cyanamid's registered trademark for certain of its acrylic fibers. Use of this trademark is authorized only on properly constructed fabrics, after they have been tested and approved by Cyanamid.

The Chemstrand Corp.

Current Prices

"Acrilan"

Effective January 1, 1959

	Regular Acrilan	Acrilan 16
2.0 denier Semi-Dull and Bright staple & tow	\$1.24	\$1.24
2.5 denier Hi-Bulk Bright and Semi- dull staple and tow	1.18	1.18
3.0 denier Bright & Semi-dull staple & tow	1.18	1.18
5.0 denier Bright & Semi-dull staple & tow	1.18	1.18
8.0 denier Bright & Semi-dull staple	1.18	1.18
15.0 denier Bright & Semi-dull staple	1.01	1.05

Terms: Net 30 days. Freight prepaid within Continental U. S. & Puerto Rico.
* "Acrilan" is Chemstrand's registered trademark for its acrylic fiber.

The Dow Chemical Company

Textile Fibers Department

Current Prices

"Zefran"

2.0 denier Semidull & Bright—Staple only	\$1.33
3.0 denier Semidull & Bright—Staple only	1.28
6.0 denier Semidull & Bright—Staple only	1.20

Terms: Net 30 days.
Transportation Terms: F.O.B. shipping point—Freight prepaid our route to points east of the Mississippi River within the continental limits of the U. S., for points west of the Mississippi River crossing nearest purchaser's mill if shipped overland or port of exit of purchaser's choice east of the Mississippi River.

* "Zefran" is Dow's registered trademark for its acrylic alloy fiber.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

"Orlon" Acrylic Staple & Tow

Type 42	Staple Length	Tow	1st Grade
1.0 Denier Semidull	1 1/4, 1 1/2, 2, 2 1/2, 3	390M	\$1.28
2.0 Denier Semidull & Bright	1 1/4, 1 1/2, 2, 2 1/2, 3, 4 1/2	470M	1.28
3.0 Denier Semidull & Bright	1 1/4, 1 1/2, 2, 2 1/2, 3, 4 1/2	470M	1.28
3.0 Denier Semidull Color-sealed Black	1 1/4, 1 1/2, 2, 2 1/2, 3, 4 1/2	470M	1.63
6.0 Denier Semidull & Bright	1 1/2, 2, 2 1/2, 3, 4 1/2	470M	1.18
6.0 Denier Color-sealed Black	1 1/2, 2, 2 1/2, 3, 4 1/2	470M	1.55
4.5 Denier Semidull	1 1/2, 2, 2 1/2, 3, 4 1/2	470M	1.18
10.0 Denier Semidull & Bright	1 1/2, 2, 2 1/2, 3, 4 1/2	470M	1.18

Tow—Total Denier 470,000
Staple Lengths—1 1/4", 2", 2 1/2", 3", 4 1/2"
High Shrinkage Staple price as Regular Staple
Type 25 This product is designed for Cotton/Rayon System Spinning and is 2.5 denier, 1 1/4" semidull regular shrinkage staple. \$1.18

Type 39 This product is designed for woolen system spinning and is a blend of deniers (average 4.2) with a variable cut length. \$.94

Type 39A This product is designed for woolen system spinning and is a blend of predominately fine deniers (average 2.4) with a variable cut length. \$.99

Type 39B This product is designed for woolen system spinning and is a blend of predominately heavy deniers (average 6.5) with a variable cut length. \$.94

F.O.B. Shipping Point—Freight prepaid our route within the continental limits of the United States, excluding Alaska.

MODACRYLIC

Eastman Chemical Products, Inc.

Tennessee Eastman Co.

Effective November 3, 1958

"Verel" Staple and Tow

Deniers	Dull and Bright
2 and 3	\$1.02 per pound
5, 8, 12, 16, and 20	.92
24 denier	.97

Prices are subject to change without notice.
Terms: Net 30 days. Payment—U. S. A. dollars.
Transportation charges prepaid or allowed to destination in continental United States, except Alaska. Seller reserves right to select route and method of shipment. If Buyer requests and Seller agrees to a route or method involving higher than lowest rate Buyer shall pay the excess of transportation cost and tax.

* "Verel" is a trade-mark of the Eastman Kodak Co.

Union Carbide Chemicals Co.

Div. Union Carbide Corp.

Textile Fibers Dept.

Effective October 1, 1957

Dynel Staple & Tow

Natural Dynel	
3, 6, and 12 Denier, Staple and Tow	1.10 per lb.
24 Denier, Staple and Tow	1.05 per lb.
Dynel Spun with Light Colors:	
Blond or Gray	
3 and 6 Denier, Staple and Tow	1.30 per lb.
Dynel Spun with Dark Colors:	
Black, Charcoal, Brown, Caramel, Green, and Blue	
3 and 6 Denier, Staple and Tow	1.40 per lb.
Dynel Type 65 High Shrinkage (3 Denier only)	Add \$.05 per lb. to above prices

Prices are quoted f.o.b. South Charleston, W. Va.

NYLON

American Enka Corp.

Effective August 19, 1958

Enka Nylon (Nylon Six Staple)

Denier	Luster	Length (Inches)	Price per pound
3	semi-dull	1 1/4, 1 1/2, 2, 2 1/2, 3, 4 1/2	\$1.28
6	bright	3, 4 1/2	1.28
8	bright	2 1/2	1.15
10	bright	3	1.08
15	bright	3	1.08
15	semi-dull	3	1.08

Deniers and lengths of staple not listed above are available upon special request.

Terms: Net 30 days. Minimum common carrier transportation charges will be prepaid and absorbed to the first destination in the continental United States. In prepaying transportation charges, the seller reserves the right to select the carrier used.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

Nylon Staple and Tow

Denier	Type	Staple Lengths	Tow Bundle	1st. Grade	2nd Grade
1.5	200	1 1/4"—4 1/2"	None made	\$1.33	\$1.18
1.5	201	1 1/4"—4 1/2"	None made	1.35	1.20
2.2	420	1 1/2" only	None made	1.28	1.13
3.0	100/200	1 1/4"—4 1/2"	430M	1.28	1.13
3.0	101/201	1 1/4"—4 1/2"	455M	1.30	1.15
6.0	100	1 1/4"—4 1/2"	330M	1.28	1.13
6.0	101	1 1/4"—4 1/2"	345M	1.30	1.15
15.0	100	1 1/2"—6 1/2"	425M	1.08	1.08
15.0	101	1 1/2"—6 1/2"	None made	1.10	1.10
15.0	600	1 1/2"—6 1/2"	425M	1.10	1.10
15.0	601	1 1/2"—6 1/2"	None made	1.12	1.12

Staple lengths are restricted to the range shown opposite each denier above. The actual cut lengths within these ranges are as follows:

1 1/4, 1 1/2, 2, 2 1/2, 3, 4 1/2 and 6 1/2

Types

Type 100 Bright, normal tenacity, not heatset.
Type 101 Bright, normal tenacity, heatset.
Type 200 Semidull, normal tenacity, not heatset.
Type 201 Semidull, normal tenacity, heatset.
Type 420 Semidull, high tenacity, high modulus, no crimp.
Type 600 Dull normal tenacity, not heatset.
Type 601 Dull normal tenacity, heatset.
These prices are subject to changes without notice.

Terms—Net 30 Days.
Freight Terms—Terms are F.O.B. shipping point, freight prepaid our route within the continental limits of the United States, excluding Alaska.

Industrial Rayon Corp.

Effective August 18, 1958

Nylon Staple

1.5 denier	\$1.33 per lb.
2, 3 and 6 denier	1.28 per lb.
8 denier	1.15 per lb.
15 and 22 denier	1.08 per lb.

Bright, semi-dull, and full-dull. Required lengths.

NYTRIL

B. F. Goodrich Chemical Co.

A division of The B. F. Goodrich Co.

DARVAN

Effective Nov. 21, 1958

Type	Not Crimp Set	Crimp Set
3, 4 1/2 and 6 Denier	\$1.45	\$1.50
1 1/2, 2 Denier	\$1.50	\$1.55

Pack in 100 Lb. Bales, Net
Staple lengths 1 1/4, 2, 3, 4 1/2
Tow—90,000 Total Denier
Bright, Semi-dull, Dull

(Deniers and lengths of staple not listed above are available upon special request.)

Terms: Net 30 Days.

F.O.B. Shipping Point (Avon Lake, Ohio) Minimum freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if overland, or port of exit of purchaser's choice east of the Mississippi River.

POLYESTER

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

"Dacron" Staple and Tow

Denier	Luster	Type*	Length	Tow Bundle	1st Gr.
1.25	Semidull	54	1 1/4"—3"	None made	\$1.36
1.5	Semidull	64	Tow only	550M	1.41
1.5	Semidull	54	1 1/4"—3"		1.36
3.0	Semidull	64	1 1/4"—4 1/2"	450M	1.41
3.0	Semidull	54	1 1/4"—4 1/2"	450M	1.36

3.0	Semidull	61	1 1/4"-4 1/2"	None made	1.38
4.5	Semidull	64	1 1/4"-4 1/2"	450M	1.36
4.5	Semidull	54	1 1/4"-4 1/2"	& Tow	1.31
6.0	Semidull	64	1 1/4"-4 1/2"	450M	1.36
6.0	Semidull	54	1 1/4"-4 1/2"	& Tow	1.31
6.0	Semidull	61	1 1/4"-4 1/2"	None made	1.31

* Type:

Type 54—Semidull, Normal Tenacity.

Type 61—Industrial Staple Having 45% Shrinkage, Not Intended for Dyeable Uses.

Type 64—Pill Resistant more Dyeable Staple Primarily for Suiting Fabrics.

F. O. B. Shipping Point—Freight prepaid our route within the continental limits of the United States, excluding Alaska.

Eastman Chemical Products, Inc.

Tennessee Eastman Co. Effective September 15, 1958

"Kodel"™

1 1/2 denier	1.60
3 and 4 1/2 denier	1.50

Terms: Net 30 days. Payment—U. S. A. dollars.

Transportation charges prepaid or allowed to destination in continental United States, except Alaska. Seller reserves right to select route and method of shipment. If Buyer requests and Seller agrees to a route or method involving higher than lowest rate Buyer shall pay the excess of transportation cost and tax.

North American Rayon Corporation

"Vycron"

Polyester P-23 (Semi-Dull)

Current Prices April 13, 1959

Staple	Denier	Cut*	Per Lb.
	1.5	1 1/2"	\$1.36
	3.0	2"	1.36

(* Can be cut to other lengths when desired).

Tow for Converters

(Tow Bundle 200,000 Den.)	1.5 den.	1.36
	3.0 den.	1.36

Tow Yarn for Direct Spinners

1.5 den. (1680/1120)	1.45
1.5 den. (3360/2240)	1.36
3.0 den. (3360/1120)	1.36

Coarse Denier Yarns, No-Twist Tubes

1.5 Denier	3.0 Denier
420/280	420/140
840/560	840/280
1260/840	1260/420
1680/1120	1680/560
3360/2240	3360/1120
	1.65
	1.60
	1.50
	1.45
	1.36

VINYON

American Viscose Corp. Effective October 1, 1956

"Vinyon"® Staple

3.0 denier 1/2" unopened	\$.80 per lb.
3.0 " 1 1/4" unopened	.80 per lb.
3.0 " 1 1/2" opened	.90 per lb.
3.0 " 2" opened	.90 per lb.
3.0 " 2" unopened	.80 per lb.
5.5 " 1" opened	.90 per lb.
5.5 " 3 1/2" opened	.90 per lb.
5.5 " 3 1/2" unopened	.80 per lb.

Terms: Net 30 days.

SARAN

The National Plastics Products Company—Fibers Division

Odenton, Maryland

The Hall Company (Selling Agent)

41 East 42 Street, New York 17, N. Y. (Oxford 7-8996)

Current Prices: Saran Staple

Type	Denier	Natural	Colors
2N	22	\$0.70	\$0.75
2N	16	.74	.79
3Q*	22	.63	.67

In any staple length 1 1/4 to 6". Also 45 denier, 7" cut.

* For carpets and industrial fabrics.

F.O.B. Odenton, Maryland.

Terms: net 30 days.

METALLICS

FAIRTEX CORPORATION

1808 Liberty Life Building

Charlotte 2, N. C.

December 1, 1958

1. Fairtex No. 200 (butyrate)—gold, silver and copper.

Width	Yield (per pound)	Price (per pound)
1/120"	21,000	\$4.75
1/80"	13,000	4.00
1/64"	10,800	3.35
1/50"	8,400	3.25
1/32"	5,300	3.00
1/16"	2,600	2.85
1/8"	1,300	2.70

2. Fairtex with Mylar® No. 100V (2 ply), (metallized type)—silver only.

Width	Yield (per pound)	Price (per pound)
1/100"	48,000	11.25
1/80"	37,000	9.40
1/64"	31,000	8.50
1/50"	24,200	8.35
1/32"	15,500	8.20

Fairtex with Mylar® No. 150V (3 ply), (metallized type)—gold and silver.

1/100"	32,000	9.55
1/80"	25,000	8.15
1/64"	21,000	7.25
1/50"	16,400	7.05
1/32"	10,500	6.85

3. Fairtex with Mylar® No. 150F, (foil type)—gold and silver.

1/100"	28,000	6.50
1/80"	21,450	5.45
1/64"	17,200	4.50
1/50"	13,400	4.40
1/32"	8,600	4.30

General Information and Conditions of Sale

1. Fairtex is supplied on 1 lb. disposable spools—48 spools per case and on 1/2 lb. disposable spools—100 spools per case.

2. Disposable spools have plastic heads with 3/4" I.D. holes.

3. Yields are subject to variation of plus or minus 5%.

4. Terms: 1%—10 days, net 30 days. Min. freight allowed on shipments of 100 pounds and over.

5. Colors available on above upon request: 35¢ per lb. additional on No. 260, 65¢ on 150V and 150F.

6. No quantity discounts on 100V, 150V and 150F qualities.

* Du Pont's registered trademark for polyester film.

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GREENVILLE, S. C., Dial Cedar 2-3868 • FALL RIVER, MASS., Dial Osborne 6-8261

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Calendar of Coming Events

July 13-17—Gordon Research Conferences, Textile sessions. Colby Junior College, New London, N. H.
 Sept. 2—AAT monthly meeting. Della Robbia Room, Hotel Vanderbilt, New York, N. Y.
 Sep. 10-11—Carded Yarn Association annual convention. The Cloister, Sea Island, Ga.
 Sep. 10-11—Fiber Society Inc. meeting. Princeton, N. J.
 Sep. 11-12—Society Plastics Industry Midwest Section conference. French Lick Sheraton Hotel, French Lick, Ind.
 Sep. 12-21—3rd International Textile Exposition. Milan, Italy.
 Sep. 17-18—Chattanooga Yarn Association annual outing. Chattanooga, Tenn.
 Sep. 17-18—Combed Yarn Spinners Association annual convention. The Cloister, Sea Island, Ga.
 Sep. 18—AATCC Northern New England Section outing. Wachusett Country Club, West Boylston, Mass.
 Sep. 23-24—Northern Textile Association annual meeting. Wentworth-By-The-Sea, Portsmouth, N. H.
 Sep. 25—AATCC Western New England Section meeting. Blake's Restaurant, Springfield, Mass.
 Sep. 28-29—American Gas Association textile processing symposium. Sedgefield Inn, Greensboro, N. C.
 Oct. 1-2—Society Plastics Industry New England Section conference. Wentworth-by-the-Sea, Portsmouth, N. H.
 Oct. 1-2—Textile Quality Control Association fall meeting. Grove Park Inn, Asheville, N. C.
 Oct. 3—Georgia Textile Operating Executives fall meeting. Georgia Tech, Atlanta, Ga.
 Oct. 7—AATT monthly meeting. Della Robbia Room, Hotel Vanderbilt, New York, N. Y.
 Oct. 7—Chemical-Finishing Conference, sponsored by National Cotton Council. Mayflower Hotel, Washington, D. C.
 Oct. 7-9—AATCC annual convention. Sheraton-Park and Shoreham Hotels, Washington, D. C.

Oct. 8-9—N. C. Textile Manufacturers Association annual convention. Carolina Hotel, Pinehurst, N. C.
 Oct. 8-9—Southern Textile Methods & Standards Association fall meeting. Clemson House, Clemson, S. C.
 Oct. 10—Alabama Textile Education Foundation meeting. Student Union Building, Auburn, Alabama.
 Oct. 10—Alabama Textile Operating Executives fall meeting. Langdon Hall, Auburn, Ala.
 Oct. 16—AATCC Northern New England Section meeting. Lexington Inn, Lexington, Mass.
 Oct. 17—Textile Education Foundation, Inc. annual meeting. A. French Textile School, Atlanta, Ga.
 Oct. 27-28—Institute of Textile Technology. Meeting of Technical Advisory Committee and Board of Trustees. Charlottesville, Va.
 Nov. 4—AATT monthly meeting. Della Robbia Room, Hotel Vanderbilt, New York, N. Y.
 Dec. 2—AATT monthly meeting. Della Robbia Room, Hotel Vanderbilt, New York, N. Y.

1960

Jan. 6—AATT monthly meeting. Della Robbia Room, Hotel Vanderbilt, New York, N. Y.
 Feb. 2-4—SPI Reinforced Plastics Division conference. Edgewater Beach Hotel, Chicago, Ill.
 Feb. 3—AATT monthly meeting. Della Robbia Room, Hotel Vanderbilt, New York, N. Y.
 Feb. 8-9—National Cotton Council annual convention. Dallas, Texas.
 Apr. 7-9—American Cotton Manufacturers Institute annual convention. American Hotel, Bar Harbor, Fla.
 May 23-27—American Textile Machinery Exhibition. Auditorium, Atlantic City, N. J.
 Jun. 23-25—Southern Textile Association annual convention. Grove Park Inn, Asheville, N. C.

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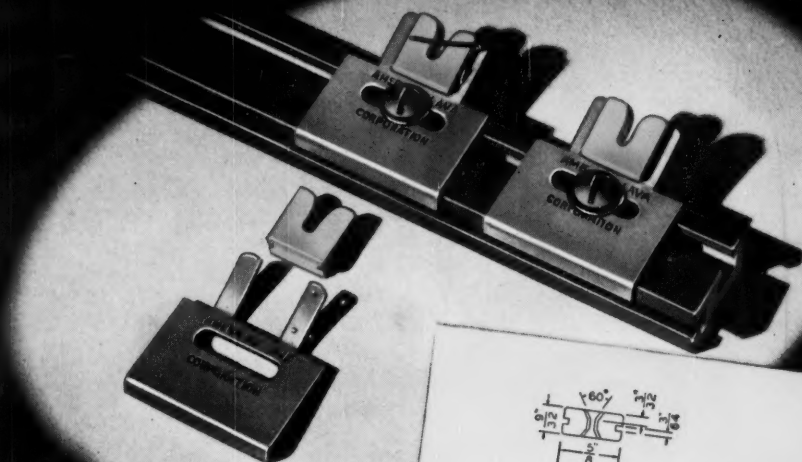
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NO. GS-20201
(Guides and holders on bar)

ANODIZED ALUMINUM HOLDERS

Part No. 20201-G (no guard wire)

Part No. 20201-H (with guard wire
to keep the yarn from jumping out.)

Above holders fit the metal rail
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Other holders are available to fit the
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LONG LIFE: ALSiMag guides are hard, homogeneous. According to records from many mills, these guides will give you at least 10 times the service of any other make of guide.

FEWER BROKEN FILAMENTS: No surface "skin" to wear through. Wear is very gradual, simply reveals new surfaces of the same character as the original. No sharp edges to cause undetected yarn damage.

EASY TO INSTALL: These anodized aluminum holders with Screw slots that permit adjustment are available to fit the bars of several makes of machines.

EASY, QUICK CLEANING: Guides are

lifted out of holders, cleaned, pressed back in position. Slight bow in top of holder holds guide firmly in position.

LESS DOWN TIME: Quickly, permanently installed. Guides lift out for fast cleaning.

MORE UNIFORM TENSION: ALSiMag guides are uniform physically and dimensionally. Available in High Polish or Satin finish. BETTER PACKAGE UNIFORMITY is the obvious result.

LOWEST COST per pound of yarn processed. Mill records indicate that this guide will do a better job for you and at **LESS THAN 10% OF YOUR FORMER GUIDE COST.**

